

Beyond the bale

ISSUE 96 SEPTEMBER 2023

PROFIT FROM WOOL INNOVATION

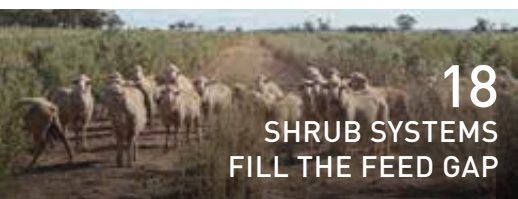
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18

SHRUB SYSTEMS
FILL THE FEED GAP



16

BUILDING BIODIVERSITY
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52

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HELPS BUILD DEMAND

Beyond the bale

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Beyond the Bale is published by Australian Wool Innovation Ltd (AWI), a company funded by Australian woolgrowers and the Australian Government.

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ISSN

1447-9680

FRONT COVER

Wool harvesting is AWI's No.1 priority. AWI has put extra resources into the training of shearers and wool handlers, in response to the heightened pressures of woolgrowers seeking wool harvesting staff – see pages 4 to 7. Pictured on the cover is shearer trainer Kevin Gellatly with a participant at a recent AWI-funded novice wool harvesting course at Muresk in Western Australia.



AWI is the R&D and marketing organisation for the Australian wool industry



23 BE PREPARED FOR FLYSTRIKE SEASON



47 ALL DAY COMFORT WITH AU NATURAL UNDERWEAR

ON-FARM

- 4 Shearer & wool handler training
- 6 New gear to attract and retain shearers
- 7 Harvesting trainers promote best practice
- 8 Biological wool harvesting on show
- 9 Backpackers boost wool's workforce
- 10 Resources for dry seasonal conditions
- 11 I have foxes. What can I do about them?
- 12 Exclusion fencing for productivity & nature
- 14 On-farm sustainability case study
- 16 Building biodiversity & natural capital
- 18 Filling the feed gap with shrub systems
- 20 Next gen solution for lice-free sheep
- 23 Be prepared for flystrike season
- 24 Breeding for flystrike resistant Merinos
- 25 Genetics of foot health
- 26 Genetic trends
- 28 Production class at Sydney Royal Show
- 30 Merino Lifetime Productivity update
- 32 Wool ambassador wins ag award
- 33 Help a youngster start their career in wool
- 34 Breeding Leadership applications open
- 35 Hay Inc stockmanship training
- 36 Peter Westblade Scholarship

AWI INVESTMENT STRATEGIES



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AWI STATE-BASED GROWER NETWORKS

AWI-supported networks are present in each state.

- Sheep Connect NSW
- Sheep Connect SA
- Sheep Connect Tasmania
- BESTWOOL/BESTLAMB (VIC)
- AWI Extension WA
- Leading Sheep (Qld)

Find your grower network at www.wool.com/networks or call the AWI Helpline on 1800 070 099.

OFF-FARM

- 38 Merino Country's 30-year milestone
- 39 Woolly by Scanlan
- 40 Merino swimwear enters the arena
- 41 Merino a runaway winner in Korea
- 42 New knitted performance outerwear
- 43 Norway goes the Merino way
- 44 Salomon Merino wool sneaker
- 45 Stay 'cool under pressure' with wool
- 46 Merino showcased on US TV
- 47 Au Natural underwear
- 48 International Woolmark Prize
- 50 Education at The Met in New York
- 51 Wool highlighted at trade shows
- 52 The Wool Lab sourcing guide
- 54 Highlights of student wool education
- 56 Market Intelligence update
- 58 Eastern Market Indicator
- 59 Insights: women's tailored clothing
- 60 National Wool Declaration
- 62 Woolgrower representative bodies
- 63 Readers' photos

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AWI WORKING FOR WOOLGROWERS



John Roberts
Chief Executive Officer
Australian Wool Innovation

AWI CEO John Roberts provides readers with an overview of how AWI is undertaking R&D and marketing to address some of the key issues faced by Australian woolgrowers.

AWI's diminishing financial reserves

The Australian wool industry operates in a dynamic and competitive global market. There are plenty of opportunities and a number of threats – but there needs to be investment by the industry in R&D and marketing to address them. This is AWI's role, but the company is hindered in this respect due to its reduced income. The company's drawdown on its financial reserves continued in 2022/23 by \$17 million. Our reserves in the bank are now at their lowest level for about a decade, having fallen by about a third since the wool levy (which AWI largely depends on for its revenue) was reduced from 2.0% to 1.5% four years ago.

In the current 2023/24 financial year, the company is having to reduce its expenditure, but we are still forecast to draw down a further \$10.5 million from reserves to maintain critical programs. That level of drawdown cannot continue for very much longer and more drastic cuts in programs are likely in 2024/25. AWI operates in a lean, efficient and transparent manner, but just like any business with a reduced income, we have to make tough choices about what projects to invest in or not invest in.

AWI already works collaboratively on many projects with industry participants on-farm and throughout the supply chain. This enables an efficient investment and leverage of funds that deliver value to Australian woolgrowers.

AWI investment on behalf of woolgrowers

AWI's latest Annual Operating Plan was issued at the end of June to inform woolgrowers, government and the wider wool industry about AWI's plans for the 2023/24 fiscal year (see wool.com/consultation). The Plan is closely aligned with the objectives in AWI's three-year Strategic Plan but is also framed by the wider financial context of the company.

AWI will live within its means and invest in the areas that woolgrowers have told us are important to them. In the on-farm area, this includes increasing the availability of wool harvesting staff, optimising sheep health and welfare, improving the genetic gain of sheep, increasing the reproductive efficiency of ewes, harnessing opportunities for on-farm automation, and encouraging the next generation into the industry.

In the off-farm area, AWI will continue to work on behalf of woolgrowers to increase demand and market access for Australian wool, by promoting the fibre's premium natural qualities, especially for luxury apparel and sportswear. In our marketing, we are focussing on promoting the eco-credentials of the fibre and taking advantage of the growth in e-commerce. We also have a wide network of supply chain partners with which we work to explore new and diverse product and processing opportunities for wool. These activities work to benefit all wool categories from fine Merino qualities right through to broader crossbred wools.

There continues to be challenging global economic conditions, exemplified by rising interest rates and damaging inflation in key markets, which affect the wool industry. Despite the gloomy global economic situation, AWI's Annual Operating Plan and Strategic Plan remain very relevant and robust. They seek to address key industry issues and exploit opportunities across the global supply chain for Australian wool, from woolgrowers through to consumers.

Fundamentally, I believe that the long-term trends in consumer preferences play in wool's favour – and this is something that AWI will capitalise on to expand the commercial opportunities for Australian wool across the world. Rest assured though that AWI, your R&D and marketing company, will continue to work relentlessly for all woolgrowers to ensure the sustainability of their industry and profitability for their enterprises.

Attracting and retaining wool harvesting staff

Attracting and retaining shearers and wool handlers in the industry remains the company's number one priority. During the past year, more than 500 new entrants received AWI-funded novice training. A further 203 learner shearers took up shearing full time and have been issued with an AWI Learner Shearer Toolkit (containing a handpiece and shearing gear); our analysis shows that 95% of them have stayed in the industry. We are also putting extra resources into the training of wool handlers. In addition to training, AWI is looking at technology-based opportunities – such as biological wool harvesting to novel sheep delivery systems – to make it easier and more efficient to harvest wool.

AWI flystrike management resources

As we head into flystrike season, AWI's flystrike extension program (see page 23) can benefit all woolgrowers regardless of their sheep type, climate, operating environment, or husbandry practices. The resources available include the *It's Fly Time!* flystrike management information, the one-day *SimpliFly* workshop to help woolgrowers develop a property-specific flystrike management plan, and the new one-day *ClassiFly* workshop which can help woolgrowers breed more natural and profitable flystrike resistance in their flocks. AWI supports all woolgrowers in their choice of best practice animal health and welfare control options to manage flystrike.

AWI Annual General Meeting

The AWI 2023 AGM will be held on Friday 17 November at the Swissotel in Sydney. This year is a director election year. Only AWI shareholders can vote at the AGM. Formal notice and meeting papers will be sent to AWI shareholders in October. AWI shareholders who are unable to attend the AGM in person will be able to view the AGM proceedings via webcast. See www.wool.com/agm for details.

SHEARER AND WOOL HANDLER TRAINING

AWI funds hands-on, practical, in-shed training for shearers and wool handlers across the country to attract and retain new entrants into the wool harvesting industry, build the capacity and longevity of existing staff, and increase returns to woolgrowers through improved clip preparation practices.

AWI National Manager, Wool Harvesting Training & Careers Development, Craig French, says AWI has responded to the heightened pressures of woolgrowers seeking wool harvesting staff in the past 12 months by putting extra resources into the training of shearers and wool handlers.

“During the past financial year, more than 500 new entrants into the industry have received AWI-funded novice training, while an additional 203 learner shearers have taken up shearing full time and been issued with an AWI Learner Shearer Toolkit (containing a handpiece and shearing gear – see page 6). Our analysis shows that 95% of learner shearers that have been issued with a learner toolkit have stayed in the industry.

“While continuing to put significant resources into shearer training next year, AWI will also put a renewed focus on training new entrant wool handlers. The demand for wool handlers is very evident – with longer periods of no work through the winter, a lot of workers leave to secure non-disruptive full-time work in other industries.

“The retention rates of trained participants across all categories of shearing and wool handling stands at 81%, with wool handlers making up a large majority of the remaining 19% that have left the industry.”

AWI-funded trainers carry out wool harvesting training in New South Wales, Western Australia, Queensland and Tasmania. In Victoria and South Australia, the AWI-

funded training is provided by the Shearing Contractors Association of Australia Shearer Woolhandler Training Inc (SCAA SWTI).

AWI thanks all the woolgrowers who provide their facilities and sheep, and all the other organisations and individuals that lend their time and resources to help run this training.

Pictured below and opposite is a small selection of AWI-funded courses recently run across the country.

More information: To arrange training in your state, email craig.french@wool.com. Keep an eye on the Facebook channels of AWI @australianwoolinnovation and SCAA SWTI @shearerwoolhandlertraining (Vic and SA) for the latest updates.



Ballarat, Vic



Cleve, SA



Colac, Vic



Cooma, NSW



Oakden Hills, SA



Tambo, Qld



Novice wool harvesting course at Muresk, WA

Making the most of the newly built six-stand shearing shed at the state government's Muresk Institute at Northam, 100 km east of Perth, AWI held its inaugural novice wool harvesting course at the Institute in June which was attended by 10 keen participants.

Aged 17 to 40, most participants had little experience of shearing or wool handling prior to joining the course, but during the five-day course they were provided with a solid introduction to the wool harvesting industry to make them job-ready for shed work, thereby helping build the wool harvesting workforce.

Participants learnt a range of skills including the details of crutching and shearing, handpiece maintenance, wool handling, wool pressing, health and safety, animal welfare, and life skills including the importance of a good work ethic to financial budgeting.

The shed-based, practical training was provided by leading industry trainers Kevin Gellatly and Damien Boyle for the shearing and Amanda Davis for wool handling.

"The 10 participants were a very industry-focused group, with all having great communication skills matched by an awesome work ethic. They were keen to learn all the principles we taught them to make them successful in the wool industry. Together, we achieved some great outcomes," Amanda said.

"Every single one of the 420 sheep provided by woolgrower Paul Antonio of Southern Brook for use during the course were shorn by the students. It was a very successful course and one that AWI hopes to run again in the future."

The courses are fully funded by AWI and are offered at no cost to eligible participants. It is a live-in course, with the accommodation for this particular course provided by the Muresk Institute.

AWI-funded novice wool harvesting courses are run across the country and are suitable for participants ranging from wool handlers looking to learn new skills in shearing, farm workers wanting to gain experience in shearing and wool handling, and those new to the shearing industry.

By the end of the course, participants should be able to shear a minimum of 40 adult Merino sheep or 50 adult crossbred sheep per day to an acceptable industry standard, so that they may be employable as a 'learner shearer' in a commercial wool harvesting operation.



The participants who completed the novice wool harvesting course at Muresk in June.

Crutching school at Muresk

Earlier in the year, in March, AWI also held a two-day crutching school at the Muresk Institute in Western Australia to provide participants with the basic skills of crutching.

With an emphasis on safety as well as productivity, the participants were taught best practice catch and drag, correct positioning of the sheep and crutcher, and handpiece maintenance. AWI crutching schools are suitable for participants ranging from wool handlers looking to learn new skills in crutching to farm workers wanting to gain experience in crutching.

"The course at Muresk comprised a great group of students with a mixture of industry workers as well as farm owners and staff learning the principles of how to crutch sheep to help maintain their own flock," said trainer Amanda Davis



NEW GEAR TO ATTRACT & RETAIN SHEARERS

In an initiative to help attract and retain new shearers in the Australian wool industry, AWI is presenting learner shearers with a handpiece and other shearing gear, subject to the shearer passing certain criteria.

The AWI project introduced two years ago enables new and committed entrants in the shearing industry to be equipped with effective tools for the trade, at no cost to the shearer.

The gear in the 'AWI Learner Shearer Toolbox' comprises a Heiniger handpiece with cutter and comb, hollow grinding check stone and pendulum, oil can and comb brush, needle and cotton, as well as a singlet and gear bag to store it all.

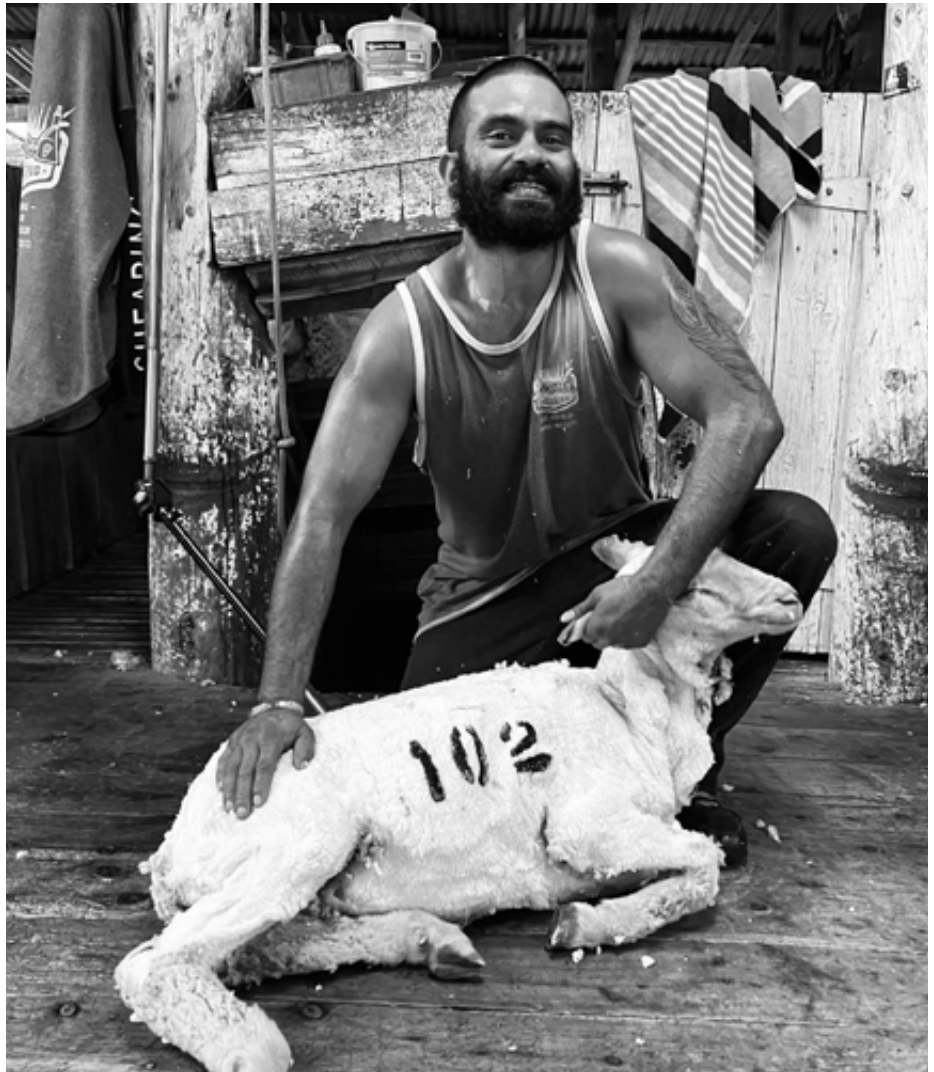
"The AWI toolbox provides an extra incentive for budding shearers to build up their skills and stay in the industry," said AWI National Manager, Wool Harvesting Training & Careers Development, Craig French.

"The gear is not a simple handout; the shearer must first pass certain strict criteria, consistent across all states. But, if successful, they will own the tools at the end of their training in 6-12 months' time.

"During the past two financial years, AWI has issued 420 toolkits to learner shearers working on stands. Pleasingly, the retention rate for these learner shearers sits at 95% nationally, meaning that 400 of those 420 shearers are still currently working in the industry as full-time shearers and only 20 have left the industry.

"The initiative has clearly played a large part in retaining learner shearers. Retention rates in NSW, Victoria, South Australia and Tasmania are 98% or more.

"Furthermore, the feedback from shearing contractors is that they are pleased with AWI's toolkit initiative and would like the company to continue investing in it in the future, which we will do."



AWI trainer Grant Lester presenting an AWI Learner Shearer Toolkit to Rhy Samuels in May. Rhy works in Kyle Brown and Taniell Pokarier-Baker's LuSid Shearing team based at Weilmoringle in northern NSW.

Rhy started out in the sheds as a wool handler and presser before taking part in an AWI novice shearing course at Warren in February. He is now shearing full time and in June sheared his first 100. Grant visits the LuSid Shearing team 3-4 times a year, which Kyle says the team looks forward to.

Thanks go to Heiniger for supporting the Learner Shearer Toolbox initiative (see its contents, far left).

HARVESTING TRAINERS PROMOTE BEST PRACTICE

The very best shearing and wool handling trainers from across the country came together at a series of three regional workshops in June to share best practice techniques and ensure that a high level of training is carried out at AWI-funded shearing schools.



Trainers sharing best practice techniques at the consistency workshops held at: (above) Naracoorte, SA; (below left) Narrogin, WA; and (below right) Dubbo, NSW.

A total of about 60 of Australia's best shearing and wool handling trainers gathered at the three regional consistency workshops to share ideas about how to best train those who will be looking after the national clip for decades to come. The focus was on a practical and hands-on approach to training.

The consistency workshops were held at Naracoorte in South Australia for SA, Vic and Tas trainers; at Dubbo in NSW for NSW and Qld trainers; and at Narrogin in WA for WA trainers.

At each of the two-day workshops, there was an emphasis on sharing best practice techniques amongst the trainers, and the best way to

deliver the finest techniques to students. There was also strong interaction between the wool handling trainers and the shearing trainers to ensure the whole shed team works efficiently in clip preparation. While consistency training is mainly focused on teaching novices, trainers also shared best practice tips for all skill levels and sheep types.

AWEX Wool Classer Registrar Fiona Raleigh attended and presented at the Dubbo and Narrogin workshops.

AWI National Manager, Wool Harvesting Training & Careers Development, Craig French, says providing consistency in wool harvesting training is vital to maintain and strengthen the industry's professionalism and retain workers.

"Each year AWI funds training for hundreds of shearers and wool handlers in all regions across the country. As with all education, it is important to ensure that the trainers themselves are teaching and promoting best practice skills in an effective way," Craig said.

"There are some tremendous trainers, many being the best in their field, and we are lucky they have such a strong commitment to handing on their expertise. Sharing knowledge has always been one of the great aspects of this part of the wool industry."



BIOLOGICAL WOOL HARVESTING ON SHOW

Woolgrowers in Western Australia have the opportunity to view biological wool harvesting at a demonstration day to be held at Katanning next month; a similar demonstration day was held at Conargo in NSW at the start of September.

As previously reported in *Beyond the Bale*, AWI is funding promising research by the University of Adelaide into a new opportunity for biological harvesting of wool that generates a weakened zone at the base of the wool fibre but, importantly, enables the fleece to *remain on* the sheep without a net until the wool can be mechanically removed.

With R&D into the innovation progressing well, woolgrowers attending the demonstration day in Katanning on 26 October will be able to talk to the University of Adelaide researchers and see the results, to date, on sheep.

The AWI-funded project continues years of collaboration with the University of Adelaide on this type of research. It is an example of the multi-pronged approach that AWI is now taking to make wool harvesting easier and more cost-effective for woolgrowers and the industry.

AWI Chairman Jock Laurie says AWI has a history of investment in new harvesting technologies, as well as shearer and wool handler training, but finding new wool harvesting solutions for woolgrowers is a leading priority for AWI.

"The biological harvesting project is very timely and has the potential to be a game-changer for wool harvesting," he said.

"It is critically important for the industry because we need to provide growers with new harvesting options. Times of pressure in industries drive change and that is exactly where we are with the wool industry right now."

More information: www.wool.com/events



Woolgrowers with AWI Program Manager Animal Wellbeing and Industry Resilience, Carolina Diaz, at the demonstration day at Conargo, NSW.

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BACKPACKERS BOOST WOOL'S WORKFORCE

When backpackers Marin Loo and Gertrud Tsigin from Estonia hit the boards with a shearing contractor in NSW's Central West last year, their journey with Australia's wool industry took a turn for the better, for all involved.



Estonian backpackers Gertrud Tsigin (above) and Marin Loo (below) were valued workers in the sheds of Central West NSW.

There are well over 100,000 backpackers in Australia and they are not all soaking up the sun on Bondi Beach. Most are here on Working Holiday visas, with many very willing to work in agriculture and as shed staff and farm hands, thereby taking the stress out of the tight labour market in rural areas.

Estonian backpackers Marin and Gertrud were at the end of a stint of wool handling when woolgrower Tom Kirk of 'Pine Park', Condobolin, came to employ the two as general farm hands.

"They were working with a contractor and after finishing work where they were, they had nowhere to go. So the contractor dropped them at my place to see if I had any work. They were looking to complete their 88 days of farm work to get a new visa," Tom said.

"They were already trained in the shed, so we went straight into shearing and did a couple of weeks before they took on some general farm work."

Tom's neighbours, through word of mouth, then took on the girls and employed them for six more weeks performing farm work.

"Estonia is a tiny country in the north of Europe and they ventured to Australia and make a difference to our industry."

Tom Kirk, NSW woolgrower

Working in the shed

About two-thirds the size of Tasmania, Estonia is a country in Northern Europe bordering Russia and the Baltic Sea, with an agricultural system very different to Australia. So, for the girls, beginning work inside a woolshed wasn't initially without its challenges, but they soon began to love it.

"Outback Australia is very different to Estonia, which is much colder, so I was really struggling with the heat," Gertrud said.

"At first, I was not so sure about the shed and working in there, but once I learnt everything I thought 'cool' and if I come back, I want to go to the sheds, not anywhere else!"

For four months, the two worked in woolsheds as shed hands – skirting wool, pressing, penning up and eventually moving on to the outside shed duties. Both girls tried their hand at shearing, finishing off the sheep with the last six or seven blows.

"I really love everyone I worked with, especially the shearers, they are all so chilled and friendly."

Now back in Estonia for the summer months, both girls plan to return to Australia in October with the intention to head back to the woolsheds.

A potential labour supply

Tom, who runs 4,000 sheep at Bundemar Merino Stud, Baldry, and another 2,000 head at his property at Condobolin, says backpackers are an untapped resource for the wool industry.

"Given the labour shortages across the industry, backpackers can be some of the great workers that can help out – both as farm hands and wool handlers," he said.

"I'd had mates who'd had backpackers for cotton harvesting, but I hadn't considered it for my business until this opportunity came along.

"And the reason I hadn't considered it was because they are generally not trained in the industry. But they are very willing workers because they want their 88 days' work and want a good report. These girls were young and enthusiastic, and they are keen to come back."

Tom explains the challenge for farmers can be actually finding and contacting backpackers looking for work in remote and rural areas.

"The hard thing is linking up with backpackers – in my case, it happened by accident."

Tom says that after more investigation, he has since come across websites that help agricultural enterprises and backpackers connect. Contacting backpacker hostels in your nearest town is also a good idea.



RESOURCES FOR DRY SEASONAL CONDITIONS

After a few years of good seasonal conditions across much of Australia, drier weather might be on its way. In case it is, AWI provides a range of resources to help woolgrowers plan and carefully manage their enterprises in the lead up to and during dry seasonal conditions.

On 15 August, the Bureau of Meteorology (www.bom.gov.au) announced the continuation of its 'El Niño Alert', meaning that there is around a 70% chance of an El Niño developing this spring.

During El Niño, there is a higher chance of reduced rainfall for eastern Australia, warmer daytime temperatures for the southern two-thirds of Australia, increased risk of extreme heat, and increased bushfire danger in south-eastern Australia.

Dry seasonal conditions need to be planned for, and carefully managed for the sustainability of wool-growing enterprises, the industry and the environment.

Some areas of Australia already have drier than usual conditions. While it remains to be seen whether drier than usual conditions eventuate more broadly across Australia this season, AWI has available for woolgrowers a range of planning and management resources, including:

Publications:

- Feeding and managing sheep in dry times
- Managing fodder prices for droughts
- Feeding and managing sheep in dry times
- Managing sheep in droughtlots
- Which sheep do I keep?
- Drought feeding and management of sheep (Agriculture Victoria).

Decision support tools:

- Cost of production calculator
- LifetimeWool feed budget tables
- Feed On Offer library.

More information: These and other resources are available at www.wool.com/drought

Livestock safety during bushfires

AWI also provides a range of information to help woolgrowers with bushfire preparation and recovery. See www.wool.com/bushfires

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I HAVE FOXES. WHAT CAN I DO ABOUT THEM?

PHOTO: Warren Howe

Woolgrowers and other communities across Australia trying to combat foxes will be better equipped with the release of a new 28-page planning guide by the Centre for Invasive Species Solutions (CISS).



PHOTO: David Cunningham

Foxes are opportunistic predators and scavengers that pose a threat to livestock and, in high density areas, they may also be a health risk to humans and pets through transmission of diseases. Foxes are also a primary cause in the decline and extinction of many small and medium-sized native lizard, rodent and marsupial species in Australia; they also prey on many bird species.

The new *Planning Guide for Fox Management in Australia* has been produced by CISS to help individuals, groups and organisations wanting to control foxes to first define the problem, then assess control options (eg baiting, shooting, trapping, fencing etc) and then prepare effective plans for fox management.

Supporting information is provided in the document to assist the plan preparation, with links to more detailed information such as the 28-page *Glovebox Guide for Managing Foxes* produced by CISS in 2020 with AWI support.

"A useful plan doesn't need to be long and complicated: a map to get you started, a list of

everyone involved, details about why you want to control the pests, and a calendar of who is doing what, when," said National Feral Cat and Fox Management Coordinator with the CISS, Gillian Basnett.

CISS has also published a new *Planning guide for feral cat management in Australia*. As well as being a massive threat to native animals through predation, feral cats also spread disease to animals including sheep.

The new planning guides provide a framework for people to select management options that suit their circumstances. The best outcomes are usually achieved when an integrated pest management approach is undertaken that combines the use of all suitable control tools.

Coordinated approach to pest management

The successful 'nil tenure' approach that has been used in Australia to limit predation by wild dogs can act as a blueprint for the control of other wide-ranging invasive species such as foxes.

A nil tenure approach highlights the benefit of focusing on the 'common problem' rather than attributing ownership of an invasive pest problem to individual land managers. It is a coordinated, collaborative, community driven approach to feral predator management.

Importantly, this community driven approach also has a positive impact on the emotional well-being of farmers in the area who now

feel that something positive is being done to address the constant financial and emotional impact of predation.

Gillian says the coordinated approach to wild dog management in Australia has provided an excellent example of what could be achieved with an integrated pest management approach, using all available tools to best effect.

"That is farmers, land managers, pest controllers and community groups talking and working together, and where multiple species are targeted," she said.

An existing wild dog management group in a region could be used to deliver strategic and targeted control programs, on private and public land, to address foxes and other invasive species as well as wild dogs.

Similar control methods such as baiting may be able to be used for several species. However, it is important to consider differences in size, physiology and behaviour between species. For example, feral pigs may eat fox baits before foxes, reducing the efficacy of a fox control program. Furthermore, individual fox baits are not sufficiently toxic to kill a pig, so the loss of these baits to feral pigs will unfortunately not result in any benefit for feral pig management.

It is recommended that FoxScan® (part of the FeralScan® suite of apps, supported by AWI) is used to record data (eg animal sightings and control activities) during the preparation and implementation of a fox management plan – see www.feralscan.org.au.

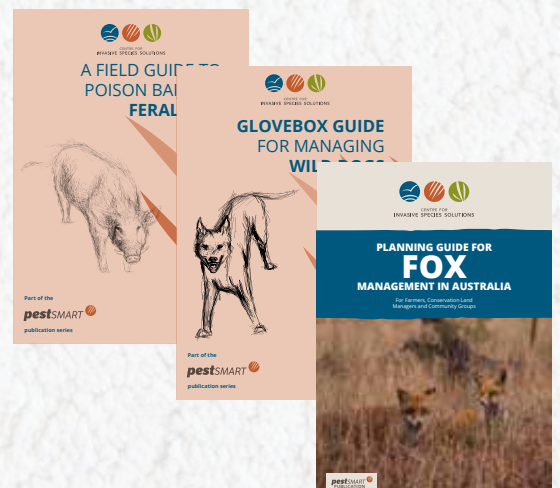
Pest management guides

Available on the PestSmart website at www.pestsmart.org.au/pest-animals/glovebox-guides-order-form are a selection of guides produced by CISS that are available to download. They are also available to order hard copy (cost involved).

- Planning guides to pest management in Australia: (1) foxes, (2) feral cats.
- Glovebox guides for managing pests: (1) foxes, (2) wild dogs, (3) feral pigs, (4) rabbits, (5) feral cats.
- Field guides to poison baiting: (1) wild dogs and foxes, (2) feral pigs.
- Best-practice management of wild dogs in peri-urban environments

The PestSmart website managed by CISS provides further best practice information on how to plan, manage and improve pest animal control programs in Australia.

More information: www.pestsmart.org.au



EXCLUSION FENCING AID'S PRODUCTIVITY & NATURE

New research has demonstrated the positive environmental impacts that exclusion fencing has on rangeland sheep grazing properties due to producers' ability to better manage total grazing pressure and access to land.

Wool production has a long history in Australia's southern rangelands. However, in recent decades, increasing predation on sheep and lambs by invasive species such as wild dogs, foxes and feral pigs badly affected weaning rates. Kangaroos and feral goats have also added to total grazing pressure, which has been a major issue affecting agricultural productivity and biodiversity. In some rangeland areas, pastoralists have been reluctant to rest paddocks from grazing livestock because of concerns that uncontrolled grazing by kangaroos would consume the regenerating pasture.

As a result of the predation on livestock and the impact of herbivores such as kangaroos on grazing capacity, the viability of many wool-growing enterprises was severely compromised. Many woolgrowers left the industry.

However, many of those that stayed in the sheep and wool industry have erected exclusion fences to control and better manage predators and total grazing pressure. The rapid transition to adopt exclusion fences has led to a significant area of land now managed behind these fences, which has proved to be pivotal for the region's wool industry.

The fencing has allowed woolgrowers to greatly improve their productivity and remain in the industry, while at the same time improve their farms' environmental health and resilience. It has also allowed other producers to reintroduce sheep on properties in former sheep districts (that had largely shifted to grazing cattle) and rejoin the wool industry.

Exclusion fencing benefits documented

A recently completed project funded by AWI developed nine detailed case studies of the impacts of exclusion fencing on rangeland sheep grazing properties in Queensland and New South Wales over a five-year period.

AWI Project Manager, Reproduction & Nutrition, Emmah Goldsmith, says the case studies document in detail the positive impacts of exclusion fencing that enable sheep producers to control total grazing pressure and access to pasture, as well as predation on sheep and lambs.

"The impact of exclusion fencing in the rangelands was described by several producers in the project as being a 'game changer' allowing their businesses to continue to prosper into the future. For many, fencing was seen as a necessity for them to continue wool-growing," Emmah said.

"Prior to exclusion fencing, many producers indicated their business viability was under significant threat due to a combination of predation, inability to control total grazing pressure and poor seasonal conditions. After fencing, with the ability to control total grazing pressure, capacity to maintain higher levels of feed across the farm and at the same time achieve higher production levels in their sheep enterprises, the outlook for the future of the businesses was far more optimistic.

"The project assessed changes and trends in ecological outcomes – such as biodiversity, soil health, and amount of threatened native species such as birds – as well as economic, production and social outcomes, and documented the changes over time.

"From this project, we have demonstrated how exclusion fencing can create a win-win, where positive business and ecological benefits can be simultaneously created. The reduced stress on the landholder and their family through having better control over their land management should also not be underestimated."

Ecological results

The project examined eight sheep grazing properties situated in the southern rangelands from Longreach in Queensland, through Blackall and Charleville, to north of Nyngan in NSW.

One additional property that was examined is located outside the southern rangelands, at Dalgety on the Monaro Tablelands of NSW. Prior to the 1990s, the ecological function of the Monaro Tablelands was accepted as rangelands, although the modern, narrower definition of rangelands excludes the Monaro Tablelands.

The nine properties behind exclusion fencing were compared to control properties outside the fence, over a five-year period.

The project used several ecological measurement techniques, including the use of remote monitoring via satellite and ground-

based measurement, to assess landscape changes over time. Wool enterprise production information was gathered from landholders.

"The research results showed that on average total standing dry matter (TSDM) was higher inside the exclusion fences compared to outside exclusion fences 68% of the time. For 29% of the time, TSDM was higher outside the exclusion fences than inside, and for only 3% of the time there was no difference between TSDM inside and outside the exclusion fences," said Mark Gardner of Vanguard Business Services, who led the research.

"Exclusion boundary fences have allowed land managers to implement enhanced grazing regimes and control total grazing pressure inside the exclusion fences."

Mark Gardner, Vanguard Business Services

"One of the questions which we wanted to investigate in the project was whether there was a difference in environmental stewardship outcomes between land types dominated by native pastures including Mitchell grass and pastures dominated by buffel grass, which were historically converted from brigalow and mulga. Three land types recorded on average the highest TSDM inside compared to outside including brigalow-buffel 90.3%, Mitchell grass 82.7% and sand plain 74%. Mulga and gidgee recorded the lowest number of months where TSDM was recorded as higher inside the fence compared to outside, 41.6% and 40.4% respectively.

"Only minor differences were observed in the pasture height and ground cover inside and outside the fences after one to four years following the closure of the boundary exclusion fences. However, by 2020, between three to six years after the closure of the fences, differences inside between fenced and control properties were obvious and significant. These differences in pasture height and ground cover were observed again in 2022, five to seven years after the closure of the fences.

"The results of our bird observation showed that the fences had no effect on bird species and abundance located on the same land types inside and outside the fences over the five years, although producer experience was that bird numbers had increased."

Management results

How the sheep producers chose to use the increase in TSDM was a matter for themselves; the decisions were based on their goals, stage of life, access to restocking capital and risk profile.

"The benefits of a higher TSDM across the farm was captured in many ways, not just through an increase in stock numbers. Landholders did not necessarily run more breeding stock," Mark said.

"However, production gains in wool cuts and weaning percentages increased substantially post-fencing; in some instances, weaning percentages increased from 35% to over 90%.

"This had a large positive impact on enterprise gross margin, at low risk."

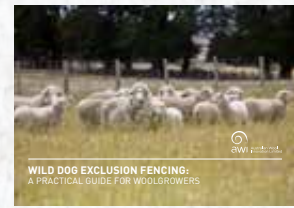
In summary, woolgrowers in the project noted that substantial productivity gains can be achieved from exclusion fencing, through:

- Higher weaning percentages and wool cuts, which means higher sales income and gross margin.
- Reduced mortality from predation by wild dogs, foxes and feral pigs.

- Lower risk through being able to maintain TSDM on the farm (control total grazing pressure) in dry periods.
- Less stress from seeing significantly fewer sheep and lambs killed from predation.
- Capacity to reintroduce sheep and to develop new on-farm enterprises.
- Ability to rest paddocks, to allow establishment of desirable species, made possible through control of total grazing pressure.
- Improved land management, resulting in further internal subdivisional fencing, water development and enhanced grazing management.
- Improved biosecurity control, including prevention of stray sheep with lice entering the property.

More information: The final project report is available on the AWI website at www.wool.com. The detailed outcomes of the project are documented in three academic papers awaiting publication.

Exclusion fencing booklets



Information and photos of successful exclusion fences are included in AWI's free 36-page *Wild dog exclusion fencing: a practical guide for woolgrowers*, which was published in 2017.

To complement the AWI guide, AWI also makes available the 14-page Kondinin Group Research Report *Exclusion Fencing, Fighting Ferals*, which was published in 2016.



More information:
www.wool.com/exclusionfencing

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SUSTAINABILITY FOCUS LOOKS TO THE FUTURE

The Ross family of Bathurst on the Central Tablelands of NSW has implemented changes on its farm to improve drought resilience, increase biodiversity and provide a better grazing environment for their sheep.

GWS Ross is a family-run superfine wool-growing business operating on 846 hectares of undulating granite country at 'Willow Glen' just south of Bathurst. The property has been in the Ross family since the 1940s when it was bought for Cam Ross and his brother, who were then teenagers, by their father.

The property is now run by Cam's son Graeme with his wife Wendy, and grandson Simon who with his wife Nikki have a young daughter Georgia who also loves the farm.

Simon says that reinforcing their property's

environmental sustainability is important to ensure the financial viability of the business.

"Making sure that both our business fundamentals and our environmental practices are as sustainable as possible is vital. They need to work together, otherwise the business would face increased risk, especially with a changing climate," Simon said.

"My philosophy as a woolgrower is to produce as much wool as we can from as few sheep as we can, maximising the ecological and environmental benefits of the farm."

Turnaround in the farm's resilience

Ever since 'Willow Glen' was purchased, the Ross family has been regenerating the land on the property, which continues to this day, thereby helping to ensure the profitability and sustainability of the business for years to come.

"When my grandfather started out on the property, I think it was quite run down and some large gullies had developed. It had obviously been run hard," said Simon.

"So, the family set about trialling and implementing ways to rebuild the health of the landscape. For example, the property was contoured early on, gullies and riparian zones have all been fenced off, and a massive number of trees continue to be planted.

"In the 1960s, the family started rotational grazing. They used a fast rotation for quite a while, but then in about 2006, Dad decided to go further: slowing down the rotation, with bigger mobs and longer rest periods, while going into the regenerative ag space."

Simon says there has been a remarkable turnaround in the farm's resilience, which is especially important in the face of a variable climate.

"We're now definitely reliant on a lot less inputs – for instance, instead of applying superphosphate every year, we re-fertilise only when we're putting in fodder crops and the like. Our reduced financial outlay on inputs makes the business more profitable.

"We are also able to capture a lot more of the rain we receive here, with much less runoff, resulting in more than 75% permanent ground cover.

"One of the important lessons that I've learnt is to move fast and early when coming into dry times, so decreasing stock size to match carrying capacity. There has of course been trial and error – during our first drought we had mobs that were too big in size that we didn't decrease quickly enough, and all of a sudden the paddocks were losing feed in two days rather than four."



The fourth generation Ross on the property, Georgia, inspecting the ewes.



Simon Ross and his father Graeme on their 'Willow Glen' property near Bathurst, NSW.

Tree lots benefit the business

A major change implemented on the property has been the planting of trees, with more than 48,000 trees planted since 2006. Tree cover is now about 140 hectares (>16% of the property) and Simon says they have a plan for the property to reach 25% tree cover.

"We have a lot of big, wide, biodiverse tree lots: 50/50 trees and shrubs. There are a lot of yellow box and red box. We've collected our own seed and grown about 10,000 of the 48,000 trees ourselves, planting between 500 and 2,000 each year," Simon said.

The Rosses grow the trees mostly along the ridgelines, to get the double advantage of windbreak and biodiversity, which Simon says is very beneficial.

"Now that most of the trees are fairly established, they provide our sheep with a lot of shelter. It's beneficial for lambing ewes; if it's going to be a cold week, we'll open a tree lot and let the ewes go in and get a little bit more shelter, which helps with lamb survival and marking rates. Also, during dry periods, we don't put out hay, we just open up the tree lots and the sheep go in and eat the long grass.

"However, the value of tree lots extends beyond the fence and into the paddock, such as from the beneficial effect of insects.

"We're also thinking of planting fodder shrubs, such as wattles and tree lucerne, in the middle of paddocks to provide even more shelter and diversity of feed, especially for dry times because trees or shrubs are more resilient than grass."

Optimism for the future

While acknowledging that the wool industry faces challenges, Simon says he's optimistic about the future of wool and agriculture in general.

"Although some people criticise livestock producers about things like methane, I think the benefits of agriculture and especially regenerative type livestock agriculture such as wool-growing far outweigh any negatives," he said.

"I don't mind the label of 'regenerative agriculture'. It's a good label because it describes quite well what we are doing and the improvements we aim to make.

"I think woolgrowers need to emphasise more the good work that they do for their land. We need to tell our eco story and the positive things we are doing to capture and store carbon on our properties. I think that will be better for woolgrowers in the long term, rather than allowing other people to use our carbon as offsets, just to make a little bit of quick cash."

Simon advises woolgrowers to take the long view when making changes to their property, especially in a grassland environment, because positive results can take time to come to realisation.

"Certainly plan well, but once you have made a decision, you have to just go for it, no half measures. For example, when we stopped mulesing, we just stopped and it meant we didn't look back. And we would never look back now."

Value of research and planning

Simon advises that careful research and planning is crucial for woolgrowers who are considering making changes to the way they run their businesses.

The Rosses themselves have been involved in various trials and research projects on their own farm to improve their business's sustainability. This research has not only been important in ensuring their business's long-term viability, but it also won them this year's Boehringer Ingelheim Industry Innovator award at the ACM

Agri 2023 Lambition Awards.

Announced in July during the Australian Sheep & Wool Show in Bendigo, these awards recognise the contribution from the country's most prestigious sheep and wool producers in regard to sustainability, leadership, innovation and production.

An example of the research in which the Rosses have been involved on their farm include the Grazing For Drought project, overseen by their local Landcare network, which aims to help producers improve their drought resilience using adaptive planned grazing. Simon says the project included a field day to understand how to maximise production during drought, and a trial to implement the practice.

"We set up pens and grazed our sheep at different rotations to determine the optimum length of rest that would allow us to keep 100% ground cover and enable us not to destock too much in a drought," Simon said.

"We have also begun to use data collected from our sheep's electronic IDs, so that we are ready and able to sell our least productive stock first if and when we get into drought conditions."

Another example of research they have been involved with is the MerinoLink Sire Evaluation Trial. About 200 woolgrowers visited their farm in June as part of the MerinoLink annual conference to see their progeny on display. The Rosses also presented information to the visitors on how they are establishing containment lots as part of their goal to maintain 100% ground cover.

"We think it is important for us to be involved in MerinoLink Sire Evaluation as much of the data we have generated is valuable to other woolgrowers, plus it's a good learning experience for us too," Simon added.

BUILDING BIODIVERSITY & NATURAL CAPITAL

PHOTO: Tetra Images

The Farming for the Future program recently issued five case studies of woolgrowers that are managing investment in their property's natural capital (environmental assets such as soil, water and vegetation) in a way that maximises both business prosperity and environmental returns including biodiversity.

Consumers, brands and regulatory bodies are increasingly wanting evidence that farmers are responsibly managing their farm's natural resources. Furthermore, there are market signals that they have expectations for farmers to adopt practices that actually build their farm's natural capital.

In response, and as part of a broad strategy to help Australian woolgrowers increase demand for their wool, AWI is co-investing in the Farming for the Future program to demonstrate to woolgrowers the business case for improving their farms'

natural capital including biodiversity.

Farming for the Future is a significant national research program initiated by the philanthropic Macdoch Foundation and is supported by other philanthropists and industry partners including the National Farmers' Federation and MLA.

"AWI's participation in the Farming for the Future program seeks to provide evidence and the business case for interested Australian woolgrowers to simultaneously improve their natural capital and also meet market requirements," said AWI's Program Manager,

Fibre Advocacy & Eco Credentials, Angus Ireland.

"The program is developing supporting tools that make this evidence relevant and accessible to woolgrowers, to inform their business planning and decision making, with specific insights on biodiversity. This new set of five case studies is the program's first set of outputs for woolgrowers."

The case studies are of the woolgrowers below and opposite; the full case studies are available on the AWI website at www.wool.com/biodiversity.



PHOTO: Jo Bear

Jo and Greg Bear

- 'Tiverton', Loddon Vale, north central Victoria (4,500 ha)
- Specialist woolgrower (medium micron) and lamb production (6,600 ewes)



PHOTO: Alex Maisey

Will and Nina Bennett

- 'Ashby', Ross, Tasmania (4,000 ha)
- Merino sheep and mixed cropping (superfine Merino wool); 20,000 Merinos (11,000 breeding ewes)



PHOTO: Alex Maisey

John and Isabelle Atkinson

- 'Maitland', Campbell Town, Tasmania (3,840 ha)
- Mixed enterprise sheep and cropping (superfine Merino wool); 5,700 head of Merinos including 1,900 breeding ewes



PHOTO: Angus Maurice

Angus and Lucy Maurice

- 'Gillinghall', Wellington, central west NSW (2,520 ha)
- Mixed enterprise sheep, cropping and eggs (18-micron Merino); 2,800 Merino ewes

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Stuart Hutton, 'Fern Hill', Guyra NSW

For woolgrower Stuart Hutton on the Northern Tablelands of NSW, a careful revision to a grazing strategy – with a focus on simplicity, improving biodiversity, and soil health – has stood the test of time through droughts and flooding rains.

At the top of a range on the Northern Tablelands of NSW is 'Fern Hill', a 1,000 ha farm owned by Stuart Hutton whose business comprises 60% Merino wool and 40% cattle. He currently runs 1,000 ewes, 950 lambs and 500-600 wethers. They are a plainer bodied sheep that require no mulesing, with 15-17 micron wool of a bold or crimping type.

The landscape of rolling hills at 'Fern Hill' creates a mosaic of vegetation types interspersed among lush paddocks, with stringybark woodland on basalt hills, patches of open grassy box woodland, and peppermint forest along wetter gullies.

Growing up on 'Fern Hill', Stuart observed first-hand profound changes to farm management – and the effects these changes had on the land.

"We used to see Scarlet Robins regularly when we were children. After that we started on the clearing regime. And then they

declined," Stuart said. Eventually, this species disappeared from the farm completely.

As a young adult, Stuart became frustrated with the stress and time commitment associated with spraying pastures and using chemicals.

"That doesn't stop ever – more fertiliser, more spraying, more equipment. My father and I were trying to work out how to get off that cycle, and to ask - was that the right way to do things?" he said.

In 1996, looking for answers, Stuart did a course in regenerative agriculture. This inspired him to make substantial changes to his farming strategy, and he hasn't looked back.

Keeping things simple

Today, Stuart's focus is on maintaining healthy pastures and soil, while keeping things as simple as possible. His grazing strategy is carefully planned. Sheep and cattle are kept in a single mob, and rotated through 80 paddocks. Paddocks are rested for long periods to promote growth and paddock health. Calves and lambs are quickly returned to the mob after weaning.

Stuart uses MaiaGrazing, an electronic grazing chart planning system, to calculate the carrying capacity of his farm – the amount of stock the land can support through different seasons and climatic conditions. Stuart adjusts the stocking rate regularly to match to carrying capacity.

Stuart believes this strategy has an important advantage. "It takes a lot of stress out of the system. If it's starting to get dry and your data is telling you to sell stock, you go and sell stock." Instead of worrying, he trusts the strategy and uses it to guide his management.

Through droughts and flooding rains

Stuart reckons his management technique has stood the test of time. "Having done it since '96, it's a fair trial. We've been through lots of droughts, and the system really works."

A major test was the 2019 drought in NSW. Stuart's grazing charts predicted a substantial reduction in the carrying capacity of his land associated with the reduction in rainfall. "The numbers were telling me that I needed to act to save my land." So he sold most of his stock.

Stuart feels strongly that he made the right choice. "Many farmers were spending \$10,000 per week on feed during 2019, and the stress was incredible for them. I didn't have that stress - I just sold everything and went on holiday. I wouldn't do it any other way."

Stuart also believes his management facilitates healthier soils and healthier land. While the drought caused substantial tree deaths in the broader district, he observed very few dead trees on 'Fern Hill'. When the drought broke, the farm was hit with 350 mm of rain. While other farms had major issues with clogged dams and gullies, Stuart's farm responded differently. There was no runoff – all the water went into the soil. "To me it was perfect, because it would move through the soil profile slowly, and there was no loss of soil."

Return of the Scarlet Robin

While Stuart hasn't noticed changes in production *per se* since he changed his strategy, he feels there are other important benefits in having healthier land. "For me, I count biodiversity and soil health as profit within my system. I'm hoping that we will get recognised for building biodiversity in the future. It's not just value for me, its value for everybody."

Quantifying the value of biodiversity and soil health is an important, yet unanswered question for Stuart. That's why he's part of Farming for the Future, a multi-year study – the biggest of its kind in the world – that aims to quantify the contribution of different types of natural resources to profitability across hundreds of Australian farms. With this insight, farmers like Stuart will be able to make more informed decisions about how to best manage their land for both its health and farm profit.

Stuart and his partner Susan enjoy the benefits that come from living on healthy land. "I really do love waking up in the morning and getting on the horses and moving stock. Whenever we can, we go out on the horses because it's quiet and you see more birds."

Since 1996, they've noticed more birds, and new species of birds gradually returning to the property. Now, the farm boasts a vibrant list of species – including Latham's Snipe, Buff-banded Rail, and, excitingly, the Scarlet Robin.

"It's a real pleasure to go out and see that stuff. I think we've still got a long way to go in that regard – but we've planted lots of trees and shrubs to try and keep them."

Stuart Hutton and his partner Susan. PHOTO: Alex Maisey



FILLING THE FEED GAP WITH SHRUB SYSTEMS

A four-year project run by CSIRO and funded by AWI and Meat & Livestock Australia (MLA) has demonstrated to sheep and wool producers how new shrub systems can make unproductive agricultural land more profitable.

Filling the late summer/early autumn feed gap is a constant challenge for woolgrowers in dryland farming regions such as Australia's wheat-sheep zones, particularly during dry years. Many woolgrowers are therefore turning to drought-tolerant native shrubs, such as saltbush, to provide an alternative source of nutrition for their livestock during the feed gap.

Anameka™ saltbush is a variety of oldman saltbush developed by CSIRO that offers higher nutritional value and palatability, compared to other saltbushes. It also allows growers to utilise infertile land and areas impacted by dryland salinity. CSIRO is also trialling elite lines of rhagodia, a closely related shrub.

Previous research has shown that sheep offered Anameka™ saltbush or rhagodia, while grazing cereal residues, maintained weight and had 20% greater wool growth than sheep offered cereals alone. Furthermore, in respiration chambers, inclusion of rhagodia led to 26% less methane produced by the sheep.

AWI Project Manager, Reproduction & Nutrition, Emmah Goldsmith, says AWI and MLA investment in a recent CSIRO research project, which ran during the past four years, has generated important data and extension products to support the adoption of shrub systems on marginal soils.

"The ultimate aim of AWI's investment in the project is for woolgrowers to improve their whole-farm stocking rates and help them manage seasonal risk, especially as climate variability increases," Emmah said.

"A key result of the research is that a new generation of perennial shrubs has been identified that have the capacity to double existing biomass growth rates and could have the potential for direct seeding.

"Information has been created and already rolled out to producers regarding shrub grazing management, and the use of fertilisers and adapted annual legumes to optimise shrub system productivity.

"Adoption of these superior shrub systems will lead to additional benefits such as reduced dryland salinity, enhanced ecosystem function, higher animal welfare and improved eco credentials for wool-growing."

Productive and commercial results



Dr Hayley Norman of CSIRO led the research into superior shrub systems. PHOTO: Damien Smith Photography

During the project run by CSIRO, a series of four on-farm paddock-scale field experiments across the agro-ecological zones of WA were used to obtain grazing data and compare shrub genotypes.

"We have identified elite oldman saltbush seed lines that have similar nutritional value to Anameka™, reliably produce at least 50% more biomass but are less palatable. These are almost ready for commercialisation. Through CSIRO's Drought Mission, we are finalising comparisons of seed ecological traits with a view to developing direct seeding for some situations," said CSIRO agricultural scientist, Dr Hayley Norman, who ran the research project.

"We have also identified adapted rhagodia lines that are incredibly productive on deep infertile sandy soils and have high digestibility and crude protein, although there are still some issues with palatability that require further consideration."

"These drought-tolerant native shrubs, grown on soils that are marginal for crop production, provide nutrients to complement crop and pasture residues during summer/autumn and reduce supplementary feed inputs."

Dr Hayley Norman, CSIRO

One of the aims of the project was to investigate opportunities to halve establishment costs through seed lines that can be planted in nurseries or possibly direct seeded in paddocks.

"The project has enabled significant progress in understanding the seed ecology of the two species and make them commercially viable. For instance, we know the optimal temperatures for germination and impact of salinity on germination. We can also successfully coat seeds to make them bigger so that they flow through commercial seeders," Dr Norman said.

"We believe that we now have the information, technology and genotypes to progress direct seeding in agricultural zones and southern rangelands. With such small seeds and climate variability, it remains a challenge, but we have developed some exciting collaborations with experts in crop seeding, novel seed coatings and soil moisture harvesting."



Shrubs can provide ideal supplementary feed during the summer/autumn feed gap and dry conditions.

Overcoming barriers to adoption

Dr Norman says the new strategies for superior shrub systems are likely to give confidence to mixed farmers to increase whole-farm stocking rates while potentially lowering the risk profile of their enterprises.

"Barriers to adoption of shrubs have usually included the high opportunity cost of using soils that are suited to cropping, the up-front cost of establishment, uncertainty about agronomic and grazing management, and a lack of on-farm data quantifying the benefits. This new project conducted research and extension to address these barriers," Dr Norman said.

The information that has been gathered in the project has already been and will continue to be used to inform mixed producers of the opportunity to utilise these shrubs to overcome nutrient gaps and give them confidence to increase stocking rates.

"Despite COVID restrictions, during the project the team delivered the project experiments and extension message at 48 events to 1,040 producers and 1,028 extension agents,

scientists and other industry members. The team has also produced numerous extension products such as magazine articles, videos and a fact sheet," Dr Norman added.

More information: A two-minute CSIRO video on grazing saltbush is available at <https://vimeo.com/733868413>

Benefits of the shrubs

- **Fill the summer/autumn feed gap** – They provide out-of-season feed that is high in nutrients that are often lacking in pastures and/or cropping residues during summer and autumn.
- **Grow on marginal land** – They grow on land that is marginal for cropping so have a much lower opportunity cost in mixed farming systems (a major barrier to adoption of perennials in these zones).
- **Make unproductive land profitable** – They offer a significant number of grazing days, especially when considering they are provided when feed is scarce and they are grown on saline, sandy and infertile soils where there are few production options.
- **Enable resting of pastures** – They allow deferred grazing on other parts of the farm; for example, it enables farmers to rest pastures from grazing over winter, leading to improved pasture productivity. They can also be used in the lead up to (grain) seeding time when sheep flocks are relocated out of grain paddocks.
- **Perennial growth** – They grow well on most landscapes and, once established, can become a 'living haystack' for grazing livestock for more than 20 years if managed correctly. Having said that, you may as well graze it heavily at least once per year as growth slows down when they get too big.
- **Risk management option** – They are adapted to semi-arid areas so maintain productivity in poor seasons, assisting producers to manage risk associated with climate variability.
- **Shelter from heat** – They offer shade and shelter during hot times and are likely to provide nutrients that assist animals to deal with heatwave events associated with climate change.
- **Shelter from cold** – They provide crucial shelter during colder months. A new research collaboration is investigating the role of saltbush to improve twin lamb survival.
- **Environmental benefits** – They offer environmental benefits including a reduction in salinity through water use in summer, methane mitigation (rhagodia), animal welfare and ecosystem services.

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Flexolt® (10 g/L fluralaner) is the first of its chemical ‘family’ (isoxazolines) to be registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) for lice control in sheep. This means that it is completely different from anything else on the market and so there should be no resistance to it, including from lice that are resistant to existing products (eg synthetic pyrethroids). Responsible use will help prevent resistance and keep it useful into the future.

Fluralaner is given as an oral drench and has its effect from the inside out – it works quickly, is not affected by wool length or weather, and does not leave detectable residue in the fleece. This means a zero-day wool handling interval but also that your sheep do not have long-term protection in the fleece:

- You must **treat the whole flock at the same time** – any lice lurking alive in the fleece of untreated animals will re-infest the treated ones.
- It is also very important to work on your strong farm biosecurity measures – prevent straying, treat/quarantine any introduced sheep, clean up wool from the shearing shed, ensure contractors have clean clothes and moccasins, etc.

Treating all sheep and preventing louse reintroduction via good farm biosecurity will together result in effective lice control.

The new fluralaner product’s current claim is against *Bovicola ovis*, the common sheep body louse. Effect against other external parasites is not known. However, the product is very new, and so this and other advice in this article may change over time. If you have further questions, it is best to contact the manufacturer.

Frequently asked questions

To kickstart your journey and ensure a seamless understanding of the new treatment, ParaBoss has compiled a list of frequently asked questions.

Everyone said there’d never be a drench for lice and now there is. Why were they wrong?

For an oral drench to kill external parasites, it needs to get from the gut into the blood. Lice don’t feed on blood, so it was believed that an oral drench could not work.

However, unexpectedly but happily, fluralaner can take one step further from the blood into oil/sweat glands (therefore onto the fleece fibres), and this is enough to kill lice while not being harmful to humans who are handling the animal or fleece.

Do I need to treat the whole mob?

The whole flock must be treated at the same time. It will kill lice and eggs within 7-43 days. Be aware that it can take up to 6 months for a lice burden to become obvious; so taking a chance by not treating some of the flock will allow any lice lurking on untreated sheep to re-infest the treated ones, wasting your time and money.

Prevention of re-infestation depends on good biosecurity.

It’s been very wet lately, can I use fluralaner?

Damp increases the risk of dermo when dipping, and rainfall may wash off a topical product. So if you need to treat in wet weather, fluralaner (working from inside the body) is a good option. Its effect is not changed by rainfall.

Shearing is a long way off / I can’t get a shearing team booked in / I’m not planning to shear the whole flock at once

Fluralaner is effective regardless of wool length, plus it has a zero-day wool harvesting interval. So if you are struggling to get a shearing contractor and your sheep are lousy, or you’re split-shearing, it could be a good choice – but make sure that you treat all animals.

I think I missed dosing that scrub wether

Please catch and dose that animal again if you’re not sure – a possible double-dose is much less risky than leaving a sheep untreated, which would allow their lice to survive and reinfest the whole mob, wasting all your time and money. Fluralaner is safe at up to 5x the label dose.

It’s advised to put a coloured mark on each dosed animal so you can have confidence on who’s been treated.

How do I plan for joining/pregnancy/lambing?

It’s advised not to treat ewes less than 4 weeks before lambing starts. This is simply to make sure all the lice and eggs on the ewes are dead, so cannot infest the newborn lambs.

If you don’t want to treat >4 weeks before lambing, wait until all ewes have lambed – fluralaner can be given safely to lambs >6 kg body weight.

It is also safe in breeding rams. So it’s best to treat the whole flock either before joining, >4 weeks before lambing, or once lambing has finished. While rams are in with the ewes just leave them to their business.

What about my dairy sheep?

Do NOT use fluralaner if milk from your ewes will ever in this or future lactations be used for human consumption.

I’ve got new sheep arriving

In general, treating the whole flock at once is strongly recommended – a single louse-infested sheep can re-introduce lice to your whole flock.

If you really do need to treat in quarantine, ensure the new sheep are dosed correctly and kept in strict biosecurity quarantine for 4 weeks, to ensure complete kill of lice and eggs.

My sheep need a second treatment

Do NOT re-treat in less than 54 days. If all sheep are dosed correctly, and biosecurity is good, the lice will be effectively controlled.

If you plan a second treatment within a year, it is good practice to use a different product containing a completely different active chemical to reduce reliance on a single active ingredient.

When can I send animals to slaughter / for export?

At the time of writing, the meat withhold period (WHP) is 14 days.

Export slaughter interval (ESI) is currently 54 days; however, it is advised to confirm this with the manufacturer or APVMA before use if you intend to export meat from any animals.

I’m planning to drench for worms at the same time

Unfortunately, we don’t have any information at the time of writing regarding any possible

changes to safety or effectiveness if fluralaner is given along with other drenches, so if you're planning to do this we advise contacting the manufacturer.

It is fine to give vaccines at the same time as fluralaner.

I have alpacas/llamas/goats as well

Fluralaner has not been studied for its effect, dose, safety, or residues in these species – it is NOT recommended to use in any animal other than sheep.

I have some shedding sheep. Can I use fluralaner for them?

Yes, fluralaner is registered for use in all breeds of sheep.

I'm worried about the safety of a new drug

Some sheep may cough after treatment, but this is reported to be of no concern. No other adverse effects have been reported in sheep, and it is safe at up to 5x the label dose.

Refer to the label for human safety, what personal protective equipment (PPE) to wear, and environmental safety (eg dispose of with care – it's very toxic to aquatic life).

More information:

www.coopersanimalhealth.com.au



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Collectively, the three Boss sheep websites – LiceBoss, WormBoss and FlyBoss – promote best practice for the management of sheep parasites at the farm level, developed by a community of veterinary experts and parasitologists from across Australia and supported by the sheep industry.

Subscribe to the free Boss Bulletin e-newsletter from ParaBoss for monthly updates and articles. Subscribe at www.paraboss.com.au/register and follow ParaBoss on Facebook at facebook.com/paraboss.com.au



ParaBoss-certified advisors: These advisors have completed the ParaBoss Certificate in Sheep Parasite Management and therefore have the skills and knowledge to apply, and provide advice to others about, effective integrated parasite management of sheep. The advisors are listed under the 'Find an advisor' tab on the ParaBoss website www.paraboss.com.au



ParaBoss-certified WEC QA service providers: These providers have demonstrated the accuracy and precision of their WEC services through the ParaBoss WEC QA program, so producers can be certain their worm control decisions are based on accurate results. A list of providers is available under the 'Find an advisor' tab on the ParaBoss website www.paraboss.com.au

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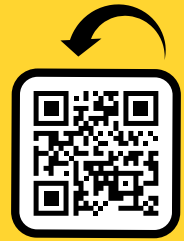


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[^]Compared to CLiK. Meat WHP 21 days. Wool WHP 3 months. Always read and follow the label directions. Good agricultural practice is essential for optimal blowfly strike prevention.

References: 1. CLiK Extra Spray-On contains 65 g/L dicyclanil and provides up to 29 weeks protection from blowfly strike. CLiK Spray-On contains 50 g/L dicyclanil and provides 18–24 weeks protection from blowfly strike. 2. When used for prevention against breech strike, or body and breech strike. 3. Insecticide resistance in sheep blowfly larvae, Sheep CRC, FlyBoss 2021.

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BE PREPARED FOR FLYSTRIKE SEASON

As we head into flystrike season, now is the time to implement your annual flystrike management plan. Early prevention of flystrike is key to minimising animal welfare and economic threats. The resources in the AWI Flystrike Extension Program are available to help woolgrowers tackle this significant sheep health and welfare issue.

AWI's Flystrike Extension Program supports woolgrowers to improve the lifetime welfare of their sheep, reduce their reliance on mulesing and crutching, optimise chemical use and increase whole farm profitability through the provision of practical information and tools and access to accredited advisor support on flystrike management.

There are currently four components available under AWI's Flystrike Extension Program available to woolgrowers to support their flystrike management: (1) It's Fly Time!™ resources, (2) DemystiFly™ resources, (3) SimpliFly™ workshops, and (4) ClassiFly™ workshops, while two other components are under development.

Woolgrowers can pick and choose how to get involved with the different components of the program that best suits their requirements, sheep type, climate, operating environment and husbandry practices.

It's Fly Time!™

Just-in-time flystrike management resources

These popular resources provide practical and tactical information for woolgrowers on integrated flystrike management in the lead up to, and during, high-risk flystrike periods. They include tips for preventing flystrike, information on prioritising sheep for monitoring and treatment, and options for treating sheep when flystrike does occur.

The resources include a recording of the It's Fly Time! webinar (1 hour) and presentation slides, plus factsheets on 'Recognising and monitoring flystrike' (4-pages) and 'Preventing and treating flystrike' (4-pages).

DemystiFly™

Managing chemical resistance resources

There are only a small number of chemical groups registered for flystrike control, so it is important to prolong the usefulness of these chemicals for as long as possible. By implementing resistance management strategies, woolgrowers can slow the development of resistance, which will help maintain the effectiveness of the currently registered chemical products.

AWI has made available a range of practical information resources about blowfly chemical resistance to 'demystify' this complex, yet

important, issue. They include factsheets, guides and producer case studies for both non-mulesed and mulesed sheep.

SimpliFly™

Strategic flystrike management workshop

SimpliFly™ is a one-day workshop, delivered by AWI-accredited advisors in partnership with AWI's state grower extension networks, to help woolgrowers reduce the incidence and impact of flystrike on their flocks and profits. During the workshop, woolgrowers will learn about the range of tools available in their flystrike management toolbox and how to use them in combination.

Throughout the day, attendees work through developing a strategic flystrike management plan and annual calendar that incorporates both short- and long-term tools specific to their property.

ClassiFly™

Breeding for flystrike resistance workshop

ClassiFly™ is a one-day workshop, delivered by AWI-accredited advisors in partnership with AWI's state grower extension networks, to help woolgrowers breed for more natural and profitable flystrike resistance. The workshop demonstrates there are both genetic and non-genetic factors that influence a sheep's susceptibility to flystrike which are described in the workshop as 'breed traits', 'wool quality traits', 'conformation traits' and 'management traits'.

Over the course of the day, workshop attendees learn about the different traits, the risk they present for flystrike, the phenotypic expression of the trait and how to class and select animals for these traits using visual assessment or Australian Sheep Breeding Values (ASBVs), or a combination of both.

And there's more...

AWI is developing two more components of the AWI Flystrike Extension Program:

- **StrateFly™** – A one-day **workshop** to develop a property-specific, whole-of-farm strategy for moving to a non-mulesed enterprise.
- **AmpliFly™** – One-on-one **coaching** and support from a trained and accredited advisor to assist growers to implement, monitor and improve their whole-of-farm plan for preventing and controlling flystrike.

Where do I find more information?

Access the It's Fly Time!™ and DemystiFly™ resources, and further information about the AWI Flystrike Extension Program, at www.wool.com/flystrikeresources or scan this QR code with the QR code reader on your smartphone.



To find out when there is going to be a **SimpliFly™ workshop** or **ClassiFly™ workshop** available near you, contact the AWI-supported grower extension network in your state and sign up to their free newsletters. You can find your network at www.wool.com/networks or call the AWI Helpline on 1800 070 099.

For more detailed information on flystrike management, including access to interactive decision support tools, visit www.flyboss.com.au

For information on AWI's flystrike research, development and extension program, visit www.wool.com/flystrike.



AWI's Flystrike Extension Program represents a long-term commitment AWI has made to assist woolgrowers in combating flystrike.

BREEDING FOR NATURAL FLYSTRIKE RESISTANT MERINOS - PUBLICATIONS

AWI makes available publications about breeding for flystrike resistant Merinos on its website at www.wool.com/flystrikelatest/#breeding

Here is a selection of the available publications:



PLANNING FOR A NON-MULESED MERINO ENTERPRISE

(March 2018)

This 16-page report outlines the key learnings from a number of wool-growing enterprises, from a diverse range of environments and Merino types, that have moved to a non-mulesed enterprise.



VISUAL SHEEP SCORES – PRODUCER VERSION

(Updated 2023)

This 76-page pocket guide for commercial and stud breeders provides a standardised framework for assessing and scoring visual sheep traits, including breech and wrinkle traits.



AN INTRODUCTION TO STOCKMANSHIP AN INTRODUCTION TO MERINO VISUAL CLASSING

(2015)

Two workshop packages comprising theory and practical activities that aim to develop participants' core skills.



SHEEP FLYSTRIKE RISK FACTORS

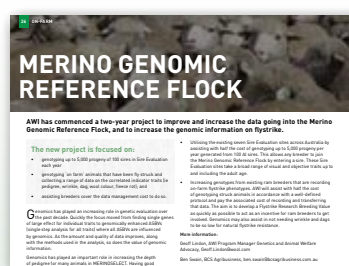
(March 2020)

BREEDING NATURALLY BREECH RESISTANT MERINOS

PART 1 – June 2020
PART 2 – September 2020

Each is a 2-page article from *Beyond the Bale*.

Plus an update in the June 2021 edition.



MERINO GENOMIC REFERENCE FLOCK

(June 2023)

One-page article from *Beyond the Bale*.

If you are a ram breeder and would like to be involved in the project (phenotyping and genotyping for flystrike), contact Ben Swain at ben.swain@bcsagribusiness.com.au



GENETICALLY REDUCING BREECH FLYSTRIKE: HOW FAST AND WHAT ARE THE CONSEQUENCES?

(June 2019)

LOW WRINKLE-HIGH FLEECE WEIGHT PRODUCTIVE SIRES EASIER TO FIND

(June 2019)

Each is a 2-page summary article from *Beyond the Bale*.

BREEDING FOR IMPROVED MERINO FEET

PHOTO: James Tyson

Genetics of Foot Health – calling on interested Merino ram breeders to participate in a new three-year research, development and extension (RD&E) project.

According to Meat & Livestock Australia's 2022 Report on Endemic Diseases, footrot costs Australian sheep producers \$83.4 million per year and foot abscess costs \$10.4 million per year. Ovine interdigital dermatitis (OID), over-grown hooves and poor pastern angle also cause lameness in sheep. Sheep with foot disease tend to have poorer condition scores, slower growth rates, lower reproductive performance and lower general productivity. There is therefore great potential to improve the productivity and welfare outcomes of Merino sheep, particularly those farmed in the medium to high rainfall zones where the incidence of foot disease is higher.

A ten-year research program in New Zealand has determined that susceptibility to footrot is heritable and the New Zealand industry has successfully developed a breeding value for footrot that can be used to reliably reduce the susceptibility of sheep to the disease. AWI, Animal Health Australia and Murdoch University together with key partner neXtgen Agri International are now due to commence a three-year project to investigate the genetic variation in susceptibility to footrot, OID and foot abscess among Australian Merinos, the correlations with other feet traits and determine if the footrot resistance data in Australia and New Zealand can be combined. There are already a number of Australian sires tested in New Zealand and the Merino Lifetime Productivity (MLP) Pingelly WA wethers were

also exposed to footrot at a Victorian trial site in recent years, but more data is needed.

If Australian Merinos can also be bred to be resistant to footrot and other foot diseases and be profitable, the lifetime welfare of sheep will be improved, the chance of reinfection will be reduced, the economic impact will be reduced and the existing control procedures will be more effective.

The project has three activities where woolgrowers can nominate to be involved:

- Activity 1 – enter a semen sire into the central progeny test where progeny will be evaluated for foot traits including their susceptibility to OID and footrot (30 AI sires per year are being sought for 2024 and 2025).
- Activity 2 – contribute eight cull rams per sire that will be challenged to OID and footrot at a research site in Victoria (the project is aiming for 100 sires across three years from 2023 to 2025).
- Activity 3 – 30 diverse ram breeders are being sought to take part in on-farm assessments of their 2023-, 2024- and 2025-drop progeny including, foot structure and shape, interdigital dermatitis and foot abscess.

Analysis of the data will follow to determine the heritability of a range of feet scores and the correlations with core production traits. Given the New Zealand experience, it is likely that the feet traits will be low to moderately heritable with few adverse correlations with the production traits. In MLP analysis to date, good feet structure is favourably correlated with higher production.

The project aims to release a research breeding value and eventually an Australian ASBV for resistance to footrot and inform the Australian Merino industry on appropriate selection strategies for each of the foot conditions examined.

Feet scores would be added to the Visual Sheep Scores guide so selection for footrot resistance is available to all interested ram breeders.

More information: For further information and expressions of interest, please contact Dr Amy Lockwood of neXtgen Agri International via amy@nextgenagri.com or Jarryd Krog, Murdoch University via jarryd.krog@murdoch.edu.au.

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New AWI supported research aims to ultimately help woolgrowers select Merino sheep that are resistant to footrot and other foot diseases.

MERINO AND DOHNE GENETIC TRENDS

The overall breed genetic trait trends for MERINOSELECT and DOHNE show gains in key economic traits. The overall Merino breed gains are an aggregate of the Superfine, Fine, Medium wool Australian types and Merinos from New Zealand (not shown opposite). Each type has some similar but also different trait trends compared to other types and the breed.

The breed and type trends are impacted by new breeders entering animals and by an increasing number of existing animals being assessed for a wider range of traits, such as wrinkle. There are individual ram breeders making faster progress than the average of the types or breed suggest.

The breed and type trends on the opposite page come from animals bred by ram breeder members of MERINOSELECT and DOHNE genetic evaluations; they do not include animals from R&D flocks such as MLP, Sire Evaluation or MLA Resource Flocks (noting the MERINOSELECT and DOHNE evaluations are two separate analyses and cannot be compared to each other). Animals from the 2022 drop are not included as all the records up to 2-year-old for the drop are yet to be collected and analysed. The figures opposite are average and not median figures. The breed average for the 2021 drop is -0.22 but the MERINOSELECT 50 percentile 'median' was -0.3. The high wrinkle animals are dragging the average higher to -0.22.

The number of Merino animals recorded from the 2000 to 2020 drop has increased from 20,638 to 158,341, the number of dag records has increased from 80 to 16,926 and the number of wrinkle records has increased from zero to 50,283. The large increase in numbers may be inflating or deflating the reported versus real genetic trends. However, as the number of recorded animals increases, the reported figure will be closer to the real industry trend.

Comments on the reported trait ASBV genetic trends since year 2000 are:

- Birth Weight (BWT) has increased by breed and type, by a consistent 0.3 kg over the last 20 years.
- Yearling Weight (YWT) has increased by 3.5 to 5.3 kgs and Adult Weight (AWT) by 2.2 to 4.8 kgs over the last 20 years with the least gains being made by the Medium Merino type.
- There is a slight decrease in Yearling Fat (YFAT) in the Merino and Dohne breeds over 20 years with a large decrease in the Superfine type and an increase in the Medium type.

- The Merino breed has had a modest increase in Yearling Muscle (YEMD) over the last 20 years, with the Medium Merino type and Dohnes having larger increases.
- The largest gains in Yearling and Adult Fleece Weight (YGFW and ACFW, respectively) have occurred in the Superfine types with the least gain in the Medium Merino type and Dohne. The Fine types are the heavier cutters, however these trends need to be put in perspective with the differences in fibre diameter, wrinkle, and wool colour trends.
- The Merino Breed and Superfine type Fibre Diameter fell from 2000 to 2010 but increased from 2010 to 2020 showing little change over the 20 years. However, the Fine (-0.37), Medium (-1.15) and Dohne (-0.49) type trends has seen a constant fall in fibre diameter over the 20 years.
- The Superfine type has increased in Wrinkle (EBWR) with the large increase in fleece weight. The other types and Dohnes have decreased in wrinkle over the last 15 years. For the 2021 drop, the Superfine type averaged +0.11, the Fine type -0.08 and the Medium type -0.48. This shows large differences in wrinkle between the Merino types. The New Zealand Merino Breech Wrinkle for the 2021 drop is -0.17 (not shown in the tables opposite).
- There are much fewer on-farm records for Wool Colour (LCOL) but there are reasonable differences between the Merino types; Superfine is -0.58, Fine is -0.21 and Medium is +0.09, with similar differences between types for Fleece Rot (LFROT). It illustrates the difficulty in taking low wrinkle Medium types into high rainfall areas, and risk of shifting strike from the breech to the body.
- Merino Weaning Rate (WR) and its component traits of conception (CON), litter size (LS) and ewe rearing ability (ERA) are new reproduction traits. The 2021 drop Weaning Rate ASBV for Superfines is 0.07, Fine is 0.13 and Medium is 0.11, reflecting the Superfine lower body weights and higher wrinkle, while these associations are less obvious in the Fine and Medium type averages. The differences in Conception between types are small, with larger but still modest differences in Litter Size and Ewe Rearing Ability. MLP results are showing sires with high and low Weaning Rate in all Merino types.
- The Yearling Worm Egg Count (YWEC) ASBVs are trending lower but erratically and could be caused by very variable seasons in high worm regions and less emphasis on worms following a run of dry years.
- Meat eating quality in Merinos is high but the trends (from genomics) are modestly unfavourable with falling Intramuscular Fat (IMF) and increasing Shear Force (SF5). There has been limited selection of these traits to date and trends a result of correlations with higher body weight and muscle.
- The Indexes are all increasing but for a range of different reasons highlighted above.

The trends show that most on farm selection emphasis is on the lead economic traits, but they also show that when market trends change (fine wool micron premium in recent years and move to lower wrinkle), it does take time to shift the momentum, particularly when the number of new incoming animals could be masking underlying trends.

Individual breeders are making much larger gains that the averages suggest.

More information: Geoff Lindon, AWI Program Manager Genetics and Animal Welfare Advocacy, Geoff.Lindon@wool.com

Table 1. Merino breed, Merino type and Dohne genetic trends since year 2000. Source: Sheep Genetics (run date 29 August 2023)

Merino breed

Birth yr	BWT	YWT	AWT	YFAT	YEMD	YGFW	ACFW	YFD	YWEC	IMF	SF5	WR	CON	LS	ERA	EBWR	EBCOV	LDAG	LCOL	LFROT	FP+	MP+	DP+
Drop	kg	kg	kg	mm	mm	%	%	micron	%	%	kg	Lamb/Ewe	Ewe Preg	Lamb/Litter	Wean/Born	Sc	Sc	Sc	Sc	Sc	Pts	Pts	Pts
2000	-0.15	0.2	-0.1	0.09	0.25	2.4	4.6	-1.0	6.5	0.04	-0.23	0.01	0.00	0.00	0.00	-0.14	-0.05	0.05	0.08	0.12	118.3	117.9	117.9
2005	-0.09	1.5	1.1	0.11	0.28	3.0	4.8	-1.2	-7.3	-0.02	0.35	0.01	0.02	0.00	0.00	-0.08	-0.07	-0.02	-0.21	-0.05	125.7	126.3	126.3
2010	0.01	2.4	1.8	0.06	0.32	5.3	6.6	-1.3	-7.1	-0.06	0.63	0.00	0.03	0.01	0.01	-0.09	-0.07	-0.03	-0.19	-0.08	129.8	131.8	132.4
2015	0.07	3.5	2.8	0.01	0.29	8.4	9.6	-1.2	-12.7	-0.16	0.90	0.01	0.04	0.02	0.02	-0.10	-0.07	-0.01	-0.18	-0.06	134.2	139.3	140.7
2020	0.15	5.1	4.2	0.03	0.41	12.4	12.6	-1.1	-7.1	-0.24	1.12	0.02	0.07	0.03	0.03	-0.19	-0.10	-0.05	-0.17	-0.07	139.6	149.0	152.9
2021	0.17	5.6	4.6	0.05	0.47	13.6	13.3	-1.0	-9.1	-0.26	1.17	0.02	0.07	0.03	0.03	-0.22	-0.11	-0.07	-0.16	-0.07	141.5	152.2	157.2
Last 20 yrs	0.31	4.8	4.3	-0.06	0.16	10.0	8.0	-0.10	-13.7	-0.29	1.35	0.01	0.06	0.03	0.03	-0.04	-0.05	-0.10	-0.25	-0.19	21.3	31.0	35.0
Last 5 yrs	0.08	1.6	1.4	0.02	0.12	4.0	3.0	0.14	5.5	-0.08	0.22	0.01	0.03	0.01	0.01	-0.09	-0.03	-0.04	0.01	0.00	5.4	9.7	12.2

(a) Superfine Merino type

Birth yr	BWT	YWT	AWT	YFAT	YEMD	YGFW	ACFW	YFD	YWEC	IMF	SF5	WR	CON	LS	ERA	EBWR	EBCOV	LDAG	LCOL	LFROT	FP+	MP+	DP+
2000	-0.23	-2.7	-3.0	0.50	0.56	-10.7	-7.3	-1.7	-9.0	0.27	-0.98	0.00	0.01	0.01	-0.01	-0.06	0.10	0.04	-0.98	-0.60	114.5	103.3	101.5
2005	-0.22	-2.3	-2.7	0.40	0.34	-8.7	-5.4	-2.0	-13.5	0.28	-0.68	0.00	0.01	-0.01	0.00	-0.08	0.03	0.03	-0.76	-0.38	122.2	112.9	109.6
2010	-0.07	-0.7	-1.4	0.09	0.20	-3.4	-0.9	-2.1	-16.0	0.13	-0.10	0.00	0.00	0.01	-0.01	0.11	0.08	-0.05	-0.59	-0.27	129.2	122.2	118.1
2015	-0.01	0.5	-0.3	-0.01	0.19	0.5	3.2	-2.0	-16.4	0.05	0.23	0.02	0.01	0.03	0.00	0.23	0.14	-0.02	-0.80	-0.32	135.7	131.2	127.1
2020	0.07	2.3	1.2	0.04	0.26	6.3	7.6	-1.8	-9.8	-0.08	0.55	0.08	0.02	0.06	0.01	0.20	0.07	-0.05	-0.67	-0.27	141.7	142.4	140.8
2021	0.08	3.1	1.9	0.07	0.32	7.9	8.7	-1.6	-10.3	-0.13	0.69	0.07	0.02	0.06	0.00	0.11	0.05	-0.06	-0.58	-0.25	142.6	145.0	144.8
Last 20 yrs	0.29	5.0	4.2	-0.46	-0.30	17.1	14.9	-0.10	-0.9	-0.35	1.54	0.08	0.01	0.05	0.02	0.25	-0.04	-0.09	0.31	0.33	27.2	39.1	39.3
Last 5 yrs	0.07	1.8	1.4	0.05	0.07	5.8	4.4	0.24	6.6	-0.13	0.32	0.05	0.01	0.03	0.01	-0.04	-0.08	-0.02	0.13	0.05	6.0	11.3	13.7

(b) Fine Merino type

Birth yr	BWT	YWT	AWT	YFAT	YEMD	YGFW	ACFW	YFD	YWEC	IMF	SF5	WR	CON	LS	ERA	EBWR	EBCOV	LDAG	LCOL	LFROT	FP+	MP+	DP+
2000	-0.15	0.8	0.3	-0.06	0.13	6.8	8.7	-0.8	15.4	0.01	-0.25	-0.01	0.01	0.00	0.00	-0.03	-0.03	0.02	0.09	0.15	120.8	123.6	122.9
2005	-0.05	2.1	1.6	0.01	0.21	7.2	8.8	-1.0	-3.5	-0.09	0.58	0.02	0.01	0.03	-0.01	-0.04	-0.08	-0.03	-0.18	-0.04	128.5	131.7	130.6
2010	0.02	2.6	2.0	0.02	0.28	8.2	9.5	-1.2	-2.7	-0.05	0.64	0.05	0.00	0.04	0.01	-0.07	-0.08	-0.03	-0.18	-0.08	133.4	137.0	136.4
2015	0.07	3.7	2.9	-0.02	0.23	10.2	10.6	-1.2	-13.0	-0.14	0.91	0.08	0.01	0.06	0.02	-0.09	-0.12	-0.02	-0.15	-0.04	137.5	143.3	143.9
2020	0.17	5.2	4.3	-0.11	0.26	14.5	14.2	-1.2	-7.8	-0.24	1.26	0.12	0.03	0.08	0.03	-0.08	-0.06	-0.05	-0.19	-0.07	143.7	154.0	156.4
2021	0.20	5.7	4.7	-0.10	0.27	15.8	15.2	-1.2	-7.5	-0.27	1.34	0.13	0.03	0.09	0.02	-0.08	-0.06	-0.07	-0.21	-0.06	146.1	157.6	160.7
Last 20 yrs	0.32	4.3	3.9	-0.05	0.13	7.7	5.4	-0.37	-23.1	-0.25	1.51	0.13	0.02	0.09	0.03	-0.05	-0.03	-0.07	-0.28	-0.21	22.9	30.4	33.4
Last 5 yrs	0.10	1.5	1.3	-0.09	0.03	4.4	3.5	0.04	5.3	-0.10	0.35	0.04	0.01	0.02	0.01	0.01	0.06	-0.03	-0.04	-0.02	6.2	10.7	12.4

(c) Medium Merino type

Birth yr	BWT	YWT	AWT	YFAT	YEMD	YGFW	ACFW	YFD	YWEC	IMF	SF5	WR	CON	LS	ERA	EBWR	EBCOV	LDAG	LCOL	LFROT	FP+	MP+	DP+
2000	-0.10	2.6	3.2	-0.33	-0.19	8.0	8.9	0.3	-0.7	-0.26	2.07	0.09	0.02	0.02	0.03	-0.44	-0.18	0.20	0.40	0.10	107.8	118	126.3
2005	-0.01	3.9	4.0	-0.08	0.24	8.5	8.9	-0.3	-2.7	-0.18	1.38	0.10	0.03	0.04	0.04	-0.34	-0.15	0.10	0.23	0.06	119.9	129	136.2
2010	0.07	4.7	4.4	0.11	0.54	6.4	7.2	-0.7	-19.6	-0.23	1.36	0.09	0.01	0.04	0.03	-0.39	-0.13	-0.01	0.13	0.07	122.9	131	137.4
2015	0.16	4.6	4.2	-0.09	0.28	9.9	12.1	-0.8	-2.4	-0.28	1.30	0.04	0.00	0.00	0.04	-0.38	-0.10	0.05	0.17	0.12	131.9	140	143.9
2020	0.24	6.1	5.5	-0.11	0.35	14.0	15.1	-0.8	7.4	-0.39	1.76	0.09	0.01	0.03	0.04	-0.44	-0.20	-0.02	0.07	0.05	137.8	150	154.7
2021	0.24	6.5	5.7	-0.03	0.49	14.3	14.9	-0.8	-0.8	-0.38	1.65	0.11	0.02	0.05	0.04	-0.48	-0.19	-0.03	0.09	0.05	138.9	152	157.9
Last 20 yrs	0.34	3.5	2.2	0.22	0.54	6.1	6.2	-1.15	8.1	-0.13	-0.31	-0.01	-0.01	0.01	0.01	0.01	-0.02	-0.22	-0.33	-0.05	30.0	31.7	28.4
Last 5 yrs	0.08	1.6	1.3	-0.02	0.08	4.1	2.9	-0.03	9.9	-0.11	0.46	0.04	0.01	0.03	0.00	-0.06	-0.10	-0.07	-0.10	-0.07	5.9	9.5	10.8

Dohne breed

Birth yr	BWT	YWT	AWT	YFAT	YEMD	YGFW	ACFW	YFD	YWEC	EBWR	EBCOV	LDAG	LCOL	LFROT	DOHNE+
2000	-0.02	-0.1	-0.1	0.15	0.06	1.0	0.2	0.2	-5.7	0.03	0.02	0.10	0.08	0.04	100.1
2005	0.11	1.1	1.1	0.15	0.41	0.7	0.8	0.0	-0.3	-0.01	0.04	0.08	-0.16		106.2
2010	0.18	2.7	2.6	0.13	0.51	1.5	1.1	-0.2	4.1	-0.07	0.00	0.04	-0.02		119.0
2015	0.25	3.9	3.6	0.08	0.58	4.3	2.9	-0.3	10.3	-0.06	-0.02	0.05	-0.04	0.00	129.4
2020	0.32	5.2	4.8	0.09	0.69	7.2	5.2	-0.3	15.0	-0.12	-0.09	0.01	-0.08	-0.09	142.2
2021	0.35	5.4	5.0	0.11	0.77	7.2	5.3	-0.3	15.3	-0.09	-0.10	0.00	-0.11	-0.09	144.7
Last 20 yrs	0.35	5.3	4.8	-0.06	0.63	6.1	5.0	-0.49	20.7	-0.15	-0.11	-0.08	-0.16	-0.14	42.1
Last 5 yrs	0.07	1.3	1.1	0.02	0.11	2.9	2.3	-0.03	4.7	-0.06	-0.06	-0.03	-0.04	-0.10	12.8

Table 2. Number of Merinos in MERINOSELECT recorded overall, and for Worm Egg Count, Breech Wrinkle and Dag since the year 2000. Source: Sheep Genetics. (Note: cull animals not included)

Year of birth	Animals recorded	YWEC records	EBWR records	LDAG records
2000	20,638	2,804	0	80
2005	39,460	3,992	676	1,677
2010	55,722	3,852	9,747	3,409
2015	103,723	7,422	13,194	9,690
2020	158,341	10,722	50,283	16,926

ASBV abbreviations: BWT birth weight, YWT yearling weight, YFAT yearling fat, YEMD yearling muscle, YGFW yearling greasy fleece weight, ACFW adult clean fleece weight, YFD yearling fibre diameter, YWEC yearling worm egg count, IMF intramuscular fat, SF5 shear force, WR weaning rate, CON conception, LS litter size, ERA ewe rearing ability, EBWR early breech wrinkle, EBCOV early breech cover, LDAG late dag, LCOL late wool colour, LFROT late fleece rot, FP+ fibre production plus index, MP+ merino production plus index, DP+ dual purpose production plus index.

PRODUCTION CLASS AT SYDNEY ROYAL SHOW

Merino breeders have been evaluating and comparing their sheep visually for decades, preparing them to be subjectively assessed by one or more judges in a show ring. But more recently, the attraction of entering a show sheep into a production class where objective measurement is included has increased.

More than ever, breeders are eager to identify the true value of their fleece and carcase traits which fundamentally rate the productivity of a Merino sheep. Over the past 10 to 15 years, the Merino has evolved and is now often referred to as the 'all purpose' sheep – it is the ultimate producer, competing well on the meat front and is a high-value mother for prime lambs, not to forget the value of the fibre harvested.

A Merino sheep's fleece and carcase traits are two main drivers for success in any Merino production system.

This year at the 2023 Sydney Royal Sheep Show, 20 sheep were entered into the production class across four categories. The production competition is made up of objective measurements taken on the day, including fleece weight, liveweight (LWT), eye muscle area (EMA) and fat depth, as well as those measured prior to the competition (such as micron and yield) to determine the value of the fleece based on the day's values.

All entered sheep are shorn on the day, which creates a great spectacle for the general

public to watch on their visit to the Show. The fleece is then split three ways – fleece, skirting and locks, and bellies – and weighed, visually assessed using the AWEX ID system, then assigned a value. The sheep then heads off to be weighed and scanned for eye muscle and fat depth at the loin by an accredited scanner.

All of the results are then tallied to provide the total points, determining the winner based on overall production value.

Richard Chalker of LachRiver Merino & Poll Merino Stud, Darby's Falls, NSW, said the production class allows the sheep to do the talking.

"Once you take the judges away from it in the show ring, the sheep does the talking in a production class," he said.

"You can't hide anything. You've got accurate body weight, fleece weight, carcase traits, the only thing judged subjectively is the conformation.

"Anyone can stand there and say a sheep is going to cut 20kg, but until you shear it you don't actually know.

"Once shorn they are stripped back bare and other traits – good and bad – become visual, whether that's good conformation or something else.

"You don't be embarrassed by a fault, that's part of it, you just try and fix it."

Julie Barron of Adina Merino & Poll Merino Stud, Peak View, NSW, is a big supporter of the production class.

"The production class is one we will always enter at the Sydney Royal," she said.

"You are putting your sheep out there for objective assessment.

"You are not trying to hide anything, and in a way, it is a learning process and when you do get recognised and win a ribbon it is validation of the productivity of our sheep.

"It is good for our own breeding objectives and our own mind and to confirm we are on the right track with our Merinos."

Many thanks to RAS NSW Sheep & Wool Committee for providing the data in the results table.



Merino Production Class – Sydney Royal Easter Show 2023

Class 328: Merino & Poll Merino ram, not more than 4 and not less than 2 teeth

Stud	Tag	Micron	Fleece value	Broken value	Belly value	Total fleece value	LWT (kg)	EMA (cm ²)	Fat depth (mm)	Fleece CV	Total objective points	Total subjective points	Total fleece points	Total points	Place
LachRiver	M22648	21.6	\$142.70	\$9.65	\$2.39	\$154.73	103	42	6	16.3	185	86	154.5	425.5	1
LachRiver	M22638	20.5	\$121.70	\$18.20	\$3.35	\$143.25	112	40	6	15.2	194	78	143.5	415.5	2
Grasmere	M23473	19.5	\$102.91	\$23.37	\$3.36	\$129.63	105	43	6	13.7	190	90	129.5	409.5	3
Hollow Mount	M24132	17.7	\$120.30	\$24.40	\$7.64	\$152.34	89	41	4	16.5	163	84	152.5	399.5	4
LachRiver	M22661	21.0	\$108.56	\$14.74	\$5.25	\$128.55	104	38	5	x	182	89	128.5	399.5	4
Grasmere	M23475	17.5	\$91.94	\$18.14	\$4.10	\$114.18	103	39	5	13.9	184	85	114	383.0	5
Adina	M23880	20.2	\$88.00	\$13.07	\$6.12	\$107.19	109	44	5	14.9	193	81	107	381.0	6
Grasmere	M23478	18.9	\$100.77	\$25.73	\$6.72	\$133.22	93	35	3	14.6	164	80	133	377.0	7

Class 329: Merino & Poll Merino ram, 6 teeth and over

Stud	Tag	Micron	Fleece value	Broken value	Belly value	Total fleece value	LWT (kg)	EMA (cm ²)	Fat depth (mm)	Fleece CV	Total objective points	Total subjective points	Total fleece points	Total points	Place
Merryville	M24253	19.3	\$152.41	\$24.57	\$8.12	\$185.09	104	43	7	17.7	187	80	185	452.0	1
Merryville	M22696	19.2	\$139.49	\$21.32	\$8.28	\$169.09	102	43	4	x	183	93	169	445.0	2
Merryville	M24050	17.6	\$137.22	\$27.83	\$8.96	\$174.00	105	40	6	17.0	183	83	174	440.0	3
LachRiver	M22658	21.1	\$104.63	\$18.67	\$5.37	\$128.67	119	44	6	15.3	205	91	128.5	424.5	4
Stillbrook	M24054	21.1	\$99.64	\$17.69	\$5.66	\$122.99	102	41	8	16.6	189	82	123	394.0	5

Class 331: Merino & Poll Merino ewe, not more than 4 and not less than 2 teeth

Stud	Tag	Micron	Fleece value	Broken value	Belly value	Total fleece value	LWT (kg)	EMA (cm ²)	Fat depth (mm)	Fleece CV	Total objective points	Total subjective points	Total fleece points	Total points	Place
Adina	M23869	17.5	\$118.26	\$20.15	\$7.89	\$146.30	73.0	34	5	13.3	147	86	146.5	379.5	1
Adina	M23871	18.1	\$119.05	\$18.10	\$4.03	\$141.18	72.5	37	7	18.9	145.5	80	141	366.5	2
Hollow Mount	M24093	17.2	\$98.96	\$15.25	\$8.18	\$122.39	72.0	34	9	17.1	150	80	122.5	352.5	3
LachRiver	M22664	19.9	\$100.39	\$12.18	\$6.08	\$118.64	74.5	35	6	21.2	139.5	87	118.5	345	4

CLASS 332: Merino & Poll Merino ewe, 6 teeth and over

Stud	Tag	Micron	Fleece value	Broken value	Belly value	Total fleece value	LWT (kg)	EMA (cm ²)	Fat depth (mm)	Fleece CV	Total objective points	Total subjective points	Total fleece points	Total points	Place
Merryville	M22437	17.1	\$126.08	\$22.24	\$8.60	\$156.92	74.5	34	7	13.8	155.5	79	157.0	391.5	1
Merryville	M22441	16.2	\$104.99	\$18.74	\$5.15	\$128.88	83.5	37	7	15.7	162.5	90	129.0	381.5	2
Merryville	M22442	16.0	\$128.99	\$17.67	\$9.60	\$156.26	76.0	32	8	19.2	146	78	156.5	380.5	3

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LEVERAGING RESEARCH FROM THE MLP PROJECT



Merino Lifetime Productivity Project

MLP QUICK FACTS

The AWI-funded MLP project is a \$13 million (\$8 million from AWI plus \$5 million from project partners), 10-year venture between AWI, Australian Merino Sire Evaluation Association (AMSEA), nominating stud Merino breeders and site partners.

- Balmoral, Vic
Partner: Tuloona Pastoral Committee: Balmoral Breeders Association
- Pingelly, WA
Partner: Murdoch University/UWA
Committee: Federation of Performance Sheep Breeders (WA Branch)
- MerinoLink, Temora, NSW
Partner: Moses & Son
Committee: MerinoLink Inc.
- Macquarie, Trangie, NSW
Partner: NSW DPI
Committee: Macquarie Sire Evaluation Association
- New England, NSW
Partner: CSIRO
Committee: New England Merino Sire Evaluation Association

The MLP project is tracking the lifetime performance of 5,700 ewes as they proceed through four to five joinings and annual shearings.

A full suite of assessments will be undertaken including visual trait scoring, classer gradings, objective assessments of a range of key traits and index evaluations.

A unique and extensive dataset will result and be used to enhance existing Merino breeding and selection strategies, for both ram sellers and buyers, to deliver greater lifetime productivity and woolgrower returns.

To stay up to date with the latest MLP findings, visit www.wool.com/MLP. Subscribe to MLP updates via www.merinosuperiorsires.com.au/contact-us

As the Merino Lifetime Productivity (MLP) project tracks ewes across the years, it is enabling research opportunities for site hosts and their affiliated organisations. Here we present an overview of some of the research that has been undertaken using MLP data.

A summary of the additional research projects (MLP Add-Ons) featured in the June 2021 edition of *Beyond the Bale* (on pages 44-45). These projects, funded by both AWI and other project supporters, are utilising the F1 ewe and wether progeny from the MLP project to address additional compelling research questions facing the Merino industry.

In July of this year, the Association for the Advancement of Animal Breeding and Genetics (AAABG) held its 25th Conference in Perth, WA, at which four papers were presented that were generated using core MLP data with three of those papers featuring MLP Add-On project data. Here we provide an overview of these papers ahead of the main MLP analysis which will commence after the last data is collected at the New England site in July 2024.

The papers highlight genetic parameters that estimate the heritability of traits and their correlations with other traits.

Heritability describes how much of the observed difference between progeny is due to their genetics. Traits with higher heritabilities, such as fibre diameter, are predominately influenced by genetics and less so by unknown environmental factors. Highly heritable traits are easier to select for and change, while traits with lower heritabilities are more influenced by unknown environmental factors and are much slower to change through breeding. A very high heritability is greater than 0.46, high is 0.26 to 0.45, moderate is 0.16 to 0.25, low is 0.06 to 0.15, and very low is less than 0.05.

Genetic correlation is the association or genetic relatedness between two traits. Correlations are described as either positive or negative (or zero where no correlation exists). The effect of this is that when selecting for one trait, you may find changes in other traits in the progeny of selected animals. A very high correlation is 0.81 and above, high is 0.61 to 0.80, moderate is 0.31 to 0.60, low is 0.11 to 0.30, and very low is 0 to 0.1.



NSW DPI's Dr Sue Mortimer, UNE postgraduate research student Erin Smith and AGBU's Dr Peter Wahinya who presented the papers at the AAABG Conference that are outlined in this article.

Paper 1: Preliminary evaluation of the impact of visual traits on lifetime ewe performance

MLP analysis team member AGBU's Dr Peter Wahinya presented a paper that featured preliminary heritability and correlation estimates between a subset of measured adult ewe traits with visual classing traits recorded at a young age. Peter looked at data across all five MLP sites up to the fourth year of age and, in an industry first, he explored the heritability of ewe survival and its correlation with early classing visual traits.

Peter found that heritability estimates were high to very high for body weight, eye muscle depth, fat depth, body wrinkle, breech wrinkle, breech cover and classer grade (0.32 – 0.64); moderate for urine stain (0.21) and legs score (0.23); and low for weaning rate (0.07) and ewe survival (0.06).

The analysis showed favourable relationships between visual classing traits and the subsequent performance of ewes including body weight, eye muscle depth, fat depth and weaning rate. Wrinkle also showed a moderate favourable relationship with ewe survival. Thus, emphasis on visual traits when selecting maiden ewes is likely to have beneficial effects on these adult measured traits. (This is a similar outcome to earlier breeding and selection trials.)

Once the full MLP dataset is complete in July 2024, this analysis will be revisited to include additional traits such as the fleece traits and full lifetime records (out to six- and seven-year-olds).

Paper 2: Comparison of udder and teat traits in Merino ewes recorded at lambing and weaning

As part of her UNE Rural Science honours thesis supported by Australian Wool Education Trust (AWET), Erin Smith undertook an Add-On project that saw the MLP project's New England ewes receive additional measurements for udder conformation in 2020.

Erin's work aimed to quantify the impact of udder traits on both lamb survival and weaning weight, and whether udder traits could be improved through selection. At the MLP New England 2022 field day, Erin shared that lamb mortality was significantly higher for ewes with unsound versus sound udders. Autopsy results showed that lambs from dams with unsound udders were significantly more likely to die from starvation than any other cause.

The paper presented at AAABG was based on further data collected from the MLP ewes in 2022 and focussed on preliminary parameter estimates to provide recommendations around how and when to record udder and teat traits to support lamb survival and weaning rates. Udder depth, teat size and teat placement were moderately to highly heritable at both

lambing and weaning (0.23 to 0.36) and were highly correlated between the two stages for ewes that reared lambs to weaning. Udder cleft showed lower heritability, and lower genetic correlation across the two stages.

These results suggest that udder records could be collected at either lambing or weaning and that the udder characteristics will respond to selection. However, udder trait recording at lambing is likely to provide a better opportunity to identify unsound udders for ewes that lose lambs at birth.

This notable work, led by Erin and New England MLP Site Manager Jen Smith, is evidence that assessing udder and teat traits has the potential to improve both lamb survival and profitability outcomes for Merino flocks. A national scoring standard for udder traits is in development to facilitate submission of data to Sheep Genetics.

Paper 3: Relationships of sire breeding values for Merino production trait with eating quality of lamb

NSW DPI's Dr Sue Mortimer authored two MLP project associated papers presented at the 25th AAABG conference – see this section and the next section.

In the first paper, Sue explored the relationships between sensory (taste testing) and objective eating quality traits (intramuscular fat and shear force as measures of flavour, juiciness and tenderness) on the key fleece and carcass Australian Sheep Breeding Values (ASBVs) for sires that were used to produce the 2018 drop MLP project Macquarie and New England wethers. This Add-On project was a co-investment between NSW DPI and MLA Donor Company.

Sue found that key trait group ASBVs (clean fleece weight, fibre diameter, staple strength, staple length, weight, fat and eye muscle) were not significantly associated with either overall consumer liking scores of loin, knuckle and topside cuts, or intramuscular fat and shear force of the loin. This is good news for the Merino industry, as it suggests we can include eating quality traits in future indexes without expecting any deleterious impact on key Merino production traits. These findings will be further tested by combining MLP dataset with other available industry data.

Paper 4: Ewe genotype effects on genetic evaluation of Merino fleece trait across ages

The final paper outlined here touches on work that was featured in the June 2023 edition of *Beyond the Bale*.

The Macquarie MLP project site was developed with two distinctly different ewe types to facilitate research to explore whether current genetic analysis accounts effectively for interactions between ewe type and ram performance.

Dr Sue Mortimer's analysis of the data up to the third adult shearing shows the two ewe types do influence the fleece traits across age stages. However, despite these differences in average performance, the ranking of sires for production traits is generally consistent across the two ewe types. There is some minor evidence of re-ranking of sire performance, although overall the paper suggests a correlation of greater than 0.7 across the two ewe bases. This supports the methods adopted by MERINOSELECT genetic evaluations that routinely fit sire by flock-year interactions to account for ewe bloodline source plus seasonal effects.

Once the complete dataset is available (end of 2023), it is anticipated that this analysis will be revisited to test these findings.

Wrap up

While the analysis results outlined here are preliminary, they provide encouraging news for the Merino industry. The papers presented highlight the value of sheep classing, the importance of selecting for sound udders, that future breeding programs can select for eating quality without impact on key production traits and, finally, that MERINOSELECT is able to account for most of the sire by ewe genotype interactions.

It's exciting to see early analysis emerging from the MLP project and we expect the analysis to gather momentum as we edge closer to having a complete and unique Merino lifetime dataset.



MLP ewes: larger teat size (top photo) and average teat size (bottom photo).

WOOL ADVOCATE WINS AG AWARD FOR YOUNG WOMEN

Young woolgrower **Florance McGufficke** from Cooma in NSW, who was last year awarded an AWI Emerging Young Leaders Scholarship, has gone on to this year be named the Sydney Royal AgShows NSW Young Woman for 2023.



Sydney Royal AgShows NSW Young Woman for 2023 **Florance McGufficke** with the Sydney Royal Easter Show Supreme Merino Exhibit winner **Lady Kate of Conrayn Merino Stud, Berridale**. PHOTO: The Land

Florance grew up on a sheep and wool enterprise near Cooma on the Monaro in Southern NSW and spent her early years in 'daddy-day-care' helping her father in shearing sheds and paddocks. Their business is family owned and operated, with a strong focus on breeding highly productive and profitable sheep and showcasing the value of data analysis and genetic evaluation.

Florance has been involved in all aspects of the family business and with these foundations went on to complete a double degree of a Bachelor of Agriculture and Business at the University of New England. She now works as the NSW Stud Stock Sales Support Officer for Elders in Dubbo.

Florance was last year awarded the AWI 2022/23 Emerging Young Leaders Scholarship which allows Florance to participate in the prestigious Cultivate – Growing Young Leaders program and join the Young Farming Champions network of early professionals advocating and leading for agriculture, run by Action4Agriculture.

"I am passionate about agriculture and building relationships and networks to promote the benefits and potential of wool: an industry full of opportunity for all. Wool is the solution to a more sustainable future. I understand the benefits of this luxurious fibre, and I have a desire to be a leading advocate for the future of the wool industry," Florance said.

"Education is key. My question to everybody is: 'What are the clothes you are wearing now made from?' Wool fabrics have come a long way and once you invest in a woollen product you will understand the benefit of this natural fibre," she said.

This year, Florance McGufficke (representing the Cooma Pastoral & Agricultural Association) won The Land Sydney Royal AgShows NSW Young Woman competition, a competition that continues to play a significant role in the development of rural women and their communities.

"Through this opportunity I am now giving back to regional towns, local communities and helping pave the way for other young women," Florance said.

The announcement in April was just the start of a busy year for Florance and the other 13 finalists who will visit agricultural shows and events promoting agriculture and the role of young women in rural NSW communities.

"It's an amazing opportunity to be part of this movement of young women in agriculture. I am excited for what the future holds for me and all the amazing women I've met," Florance said.

Florance has learnt that things don't always work out as you planned or how you want, but if you remain open-minded and optimistic there is always an opportunity.

A quote of Franklin D. Roosevelt that resonates with Florance and one she has ambition to follow is: "We cannot always build the future for our youth, but we can build our youth for the future."



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HELP A YOUNGSTER START THEIR CAREER IN WOOL

Do you want to introduce a young Australian to a rewarding career in the wool industry, whilst accessing a workforce for your farm? Sign up your business to become a host-farm in the AgCAREERSTART program for 10-12 months and share your skills, knowledge, and industry insights with the next generation.



Through the AgCAREERSTART program, eligible host farmers share their skills and knowledge with a young Australian that they employ on their farm for 10-12 months.

AgCAREERSTART is a 10–12-month program placing young Australians aged 17–25 on farms across Australia. The program links farmers looking for workers together with AgCAREERSTART participants who are keen to start their career in agriculture.

The program is funded by the Australian Government Department of Agriculture, Fisheries & Forestry and is delivered by the National Farmers Federation.

AgCAREERSTART Training and Career Development Coordinator, Chloe Smart, says the program will place 100 young people

next year on farms across Australia in all agricultural industries.

“However, because there has been a high demand in past years for placements on sheep and wool properties, AgCAREERSTART is particularly looking for sheep and wool producers who would like to take part as a host farm in next year’s program,” Chloe said.

When you sign up your business to become a host farm, the AgCAREERSTART team will then work with you to identify suitable applicants for a placement in your business and will continue to support you through the entire 10–12 months as you mentor and train your participant. You can host multiple participants.

Eligible host farmers will receive a \$2,000 grant. Applications for the 2024 program close on 15 October 2023. Placements usually start around the following January/February.

“The feedback from 2023 host farmers has been overwhelmingly positive.”

Chloe Smart, AgCAREERSTART

“The participants come from a variety of backgrounds, but all are passionate about commencing/progressing their career in agriculture. The participant is your employee and can undertake any job that you feel

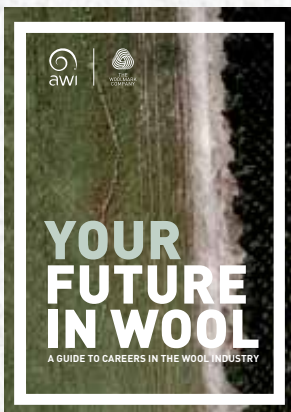
is safe and warranted for their level of experience. We encourage you to show the diversity of jobs across your farm and allow the participant to try new tasks in line with their capabilities,” Chloe said.

To be part of the program, you must:

- be able to offer a safe and positive experience for a young Australian.
- have the capacity to teach and support someone who might have limited experience in agriculture.
- be able to offer full-time paid employment, at or above award wages, for a period of 10–12 months in 2024.
- offer flexibility to your participant so they can undertake training and attend industry events.
- provide accommodation or assist in finding accommodation off farm.

Chloe has wide experience in encouraging the next generation of workers into the sheep and wool industry, not only due to her involvement in AgCAREERSTART but also previously as an AWI-supported Young Farming Champion and a committee member of the Hay Inc Rural Education Program (see page 35) and Peter Westblade Scholarship (see page 36).

More information: www.agcareerstart.com.au



AWI's new 50-page 'Your future in wool' guide is available to download from the AWI website.

AWI guide to careers in the wool industry

To encourage more youngsters to consider a career in the wool industry, AWI has launched a new guide that showcases the diverse range of roles within the wool industry: from farmhand to wool classer, AI technician to veterinarian, extension officer to livestock agent.

The new 50-page 'Your future in wool' guide also provides the pathways that students can follow to embark upon the particular career in wool that interests them. It also helps them investigate the skills, knowledge, attitude and experience they need to excel in the industry.

There are also lots of stories about real people working in the wool industry and they share some great tips about what it takes to be successful and make the most of the available opportunities.

“It has always been important to attract young people into the wool industry, but it is especially critical right now due to the labour shortages across the whole country that are affecting many industries,” said AWI CEO John Roberts.

“This new guide gives young people the tools to explore the opportunities to embark on a fulfilling career in the wool industry. Choosing a career can be tough, so getting to know a bit about the different roles and jobs that exist in the industry will be a great step forward.”

More information: <https://info.wool.com/careers-booklet>

BREEDING LEADERSHIP APPLICATIONS NOW OPEN

Applications are now open to young woolgrowers from across the country to join AWI's 2024 Breeding Leadership course in Clare, South Australia, which is helping foster the next generation of leaders within the wool industry.

If you are passionate about your industry and want to develop your skills to make a difference in the future, AWI's Breeding Leadership professional development course is for you!

Breeding Leadership is designed for anyone 25 to 35 years old currently working in agriculture with a focus on the wool industry. Held every two years, the course is next being delivered from Monday 12th to Friday 16th February 2024 in Clare, South Australia.

It is an excellent opportunity to network with 20 like-minded people from across Australia. Participants will get the opportunity to learn from skilled deliverers and be trained in areas such as people management, corporate governance, strategic planning and time management. The week's events involve a mix of both classroom and fieldwork, excursions to stud and commercial operations, and an exposure to a variety of non-woolgrowing enterprises.

At the end of the course, participants will have developed foundation leadership skills that will enable them to become enthusiastic, influential, dynamic and dedicated leaders within the wool industry and their local community.

More than 200 young Australians have attended the course to date, with many previous participants now holding leadership

positions within business and industry.

Breeding Leadership was established in 2002 by South Australian Stud Merino Breeders Association and became a national program through Australian Association of Stud Merino Breeders in 2004. Since 2012, AWI has funded the course.

Participants are required to pay a course fee of \$484 (including GST) which contributes to the cost of the program.

Applications close on Wednesday 18 October.

Download the application form at www.wool.com/breedingleadership



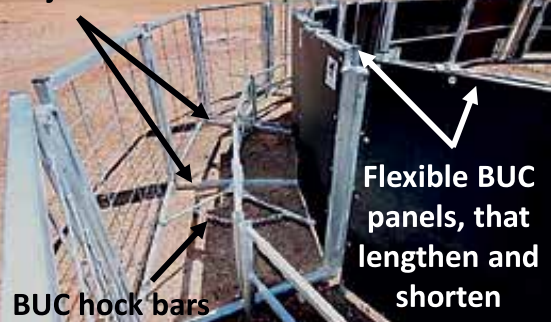
Participants at the 2022 Breeding Leadership course, pictured here with the Andrew Michael at Leachim Poll Merino Stud in South Australia.



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HANDS-ON, PRACTICAL STOCKMANSHIP TRAINING

PHOTO: Mads Porter Photography

With the support of AWI, the Hay Inc Rural Education Program in the Hay district of NSW continues to help young people gain hands-on agricultural skills, wool harvesting training and experience.

The 15 young participants in the 2023 Hay Inc Rural Education Program came together in June for their third and final training week, which was followed by their graduation at the Hay Merino Sheep Show at which they were presented with their certificates.

The Hay Inc Rural Education Program was launched in 2014 with support from AWI in response to concerns about the decline in the traditional jackaroo/jillaroo system in the western Riverina district of NSW and the associated lack of stockmanship and other essential rural skills being handed down to the younger generation.

"Through the Hay Inc program, young people are now being given the opportunity to learn the practical agricultural skills needed for them to get jobs on rural properties. It focuses on wool and livestock production and takes place in a practical setting in partnership with local woolgrowers. This year, we also included an Ag Careers panel which involved some of the Hay Inc alumni and others sharing their stories of their careers," said program manager Sandra Ireson.

"The program is delivered by trainers who have many years of experience on extensive rural

properties, covering topics based around the production calendar for sheep, wool production and cattle. We also engage Tocal and TAFE trainers for some accredited training, ie workplace health and safety."

Applications for the 2024 training program are now open. Employers can send their employees on the program or other interested young people can apply directly. Applicants can be from anywhere and do not have to be from the Hay district. Scholarships for graduates of the program are also available.

Practical, hands-on training

The Hay Inc program is a three-week course, in three blocks of five days' training, this year in February, March and June.

Topics covered include sheep handling and yard work, shearing and wool shed management, sheep health and nutrition, lamb marking, Merino sheep classing, sheep pregnancy scanning and lamb postmortems. Other topics included working dog training, livestock water maintenance, fence construction and maintenance, farm health and safety, quad bike and motorbike

operation and maintenance, natural resource management and plant identification.

AWI has supported the Hay Inc program each year since its inception and will be supporting the 2024 program. The application form for those aged 18 to 25 years is available on the Hay Inc website.

"Our funding in programs like this aims to help improve the engagement of young people interested in the wool industry, thereby developing and retaining the skills the wool industry needs to be innovative in response to new challenges," said AWI CEO John Roberts.

More information: www.hayinc.com.au



The training covered a wide range of subjects such as a three-day introduction to shearing (left) by AWI at 'Curragh' that also included a wool handling demonstration (middle) by Rose Nevinson, and a sheep classing day (right) at 'Burrabogie'.

PETER WESTBLADE SCHOLARSHIP ENCOURAGES THE YOUNGER GENERATION

Now in its eleventh year, the Peter Westblade Scholarship delivers practical, hands-on training and mentoring to young people pursuing a career in the sheep and wool industry.



Young participants learning from industry leaders at the Peter Westblade Wyvern Training Weekend in February.

As one of the sponsors of the Peter Westblade Scholarship, AWI is supporting the next generation of leaders in the Australian sheep and wool industry. The Scholarship aims to identify, train and develop young people aged 18 to 30 who are enthusiastic about the industry and want to make a difference.

Established in 2010, the annual scholarship honours the late Peter Westblade, the Lockhart sheep producer who was passionate about breeding profitable sheep and was a strong supporter of young people interested in agriculture.

The winners of the 2023 scholarship, announced at the Peter Westblade Scholarship Ball at Wagga Wagga in June, are Gabbie Horton (24) and Georgia McMaster (25).

Originally from Tasmania, Gabbie is currently working as farm manager for Monmot Farming at Stockyard Hill in Victoria where she is managing a 3,000 head, non-mulesed Merino ewe flock.

"I am continuously amazed by the generosity and support that industry members have shown me throughout my time working with sheep and wool," Gabbie said. "The culture of mentorship is something that we are incredibly lucky to have within our ag community, and with the attitude that there is room for everyone to succeed, the sheep and wool

industry will continue to grow and prosper."

Georgia is originally from Goondiwindi in Queensland and is a veterinarian working for Central West Genetics near Dubbo, NSW.

"I am always hungry for any opportunity to work with other young people and improve myself," Georgia said. "I have a strong family history within the industry which I am very proud of – and I resonate with the morals and values the sheep and wool industry strive for."

The scholarship provides practical training and mentoring from industry innovators and leaders, and the ability to develop a wider network of key contacts in the industry. The scholarship also provides opportunities to be involved in projects to promote new technologies within the sheep and wool industry.

Chairman of the Peter Westblade Scholarship Committee, Ben Patrick, was the scholarship winner back in 2014, which he says allowed him to expand his knowledge of Merino breeding operations.

"The 12-month scholarship opened many doors and I developed a strong network within the sheep and wool industry, which I still call upon today. The opportunity to learn from the best in the industry is invaluable to a young person starting out," he said.

Wyvern training weekend

A key element of the Peter Westblade Scholarship program is the annual training weekend, established to encourage, educate and mentor young enthusiasts with practical training for the sheep and wool industry.

The training is held at the state-of-the-art facilities of Wyvern Station, a 50,000-hectare property owned by T.A. Field Estates at Carrathool in the Riverina of NSW. T.A. Field Estates has been a long-term supporter of the Peter Westblade Scholarship and generously hosted the event again in 2023 which was attended by 38 keen youngsters aged 18 to 30.

The weekend in February consisted of hands-on workshops and mentoring sessions to improve the participants' skill sets and build their industry networks. While the individual attendees gained a lot from the weekend, the benefits will also flow through to their employers and the wider industry.

There were 17 leading industry professionals, in addition to previous Peter Westblade Scholarship winners and committee members, in attendance to pass on their invaluable knowledge to the next generation. Topics covered included sheep selection, stockmanship, business skills, animal health assessments, professional development and wool marketing.

More information: www.pwscholarship.com.au



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THE WOOL LAB
AUSTRALIAN WOOL INNOVATION LIMITED

The Wool Lab is a premier sourcing guide to the world's best commercially available wool fabrics and yarns. It has become an important tool for the global textile industry and is helping to build the demand and use of Australian wool globally - see pages 52-53 for details.

MERINO COUNTRY'S 30-YEAR MILESTONE

Australian clothing brand Merino Country was established by Kerrie Richards 30 years ago on her family's sheep and cattle station in Queensland to add value to the family's raw Merino wool. The company has now grown to be one of the country's largest retailers of Australian Merino wool clothing.



Merino Country owners Kerrie Richards and Malcolm Pain.

Now based between Brisbane and the Gold Coast, Merino Country produces a wide range of Australian Merino clothing. Its fabrics are knitted and dyed in Australia, with all its garments sewn in its own factory, employing local people and supporting its community.

As well as its underwear, thermals and activewear, the company's product range includes a wide range of tops, dresses, skirts and accessories – all made from Australian Merino wool. While there is a strong focus on retail customers, Merino Country also supplies products to the Australian Defence Force, the Australian Antarctic Division and Victoria Police.

"Merino Country produces 100% Australian Merino clothing for men, women and children which is comfortable, durable and totally machine washable and ideal for everyday wear in hot and cold climates," Kerrie said.

"We are involved in the whole of the supply and marketing chain and have developed our own innovative fabric that is ideal for everyday wear including the workplace, leisure, travel and industrial use.

"We work closely with Australian woolgrowers, processors and manufacturers and have input into the specifications of not only the raw wool, but also yarn types, fabric construction, design and manufacturing of garments."

Business began on the farm

The idea for Merino Country was born in the early 1990s during tough times for many rural communities with low commodity prices for beef and wool, drought and a huge drain of young people from country towns.

At this time, Kerrie was coordinating a state government program that was helping local groups and individuals identify opportunities and value-add to existing enterprises.

"One of these groups was a wool group called Matilda Merino and members wanted to know what happened to their wool once it left the farm gate and what it was actually used for," Kerrie said.

"I helped initiate a number of projects including following wool through the value-adding chain to the end product and also promoting Australian Merino wool locally. This led to me developing my own business in value-adding to Merino wool and producing a range of Merino clothing."

The company was launched in 1993 and was originally based in the shearers' quarters at the family's 'Clareborough Station' outside of Richmond in North West Queensland.

Thirty years on, Merino Country is now a well-established company that has gone

from strength to strength. Owners Kerrie Richards and husband Malcolm Pain credit the success of their business to a combination of their grazing and farming background, an amazing team of people that have been with the company for many years and an incredible natural fibre, Australian Merino wool.

"At the beginning, we made a conscious decision to keep our production and manufacturing in Australia to support local jobs and industry and to have better control over our quality. This has definitely paid off for us during the past 30 years, particularly in the past few years during COVID," Kerrie said.

Australian Merino wool central to business

As Merino Country continues to innovate and expand, Merino wool has remained fundamental to the company's ethos and product range.

"We are proud that the Merino wool we use is grown in Australia, the best in the world. At the beginning, we named the company Merino Country partly because that's where we came from but also because Australia is *the* Merino Country, growing 80% of the world's Merino wool," Kerrie said.

"I'm motivated by new projects, new goals, new customers, new products and the fact that people love our products so much! The thing I like most about what I do is using 100% Australian Merino wool to create products that provide solutions to our customers' problems.

"I love seeing customers wear our product, and also hear where they've worn it. I've seen pictures from Defence personnel in Afghanistan wearing our thermals, to café scenes in Paris, breathtaking scenes in Mongolia and breast cancer patients getting relief with our bras! I love the diversity of our customers and our Australian made products."

More information: www.merino-country.com



TIMELESS APPAREL FROM SWOOLLY BY SCANLAN

Western Australian apparel brand Swoolly by Scanlan is creating retail demand for the state's wool by making its sweaters with Merino wool grown by clients of family-owned Scanlan Wools based in Fremantle.



The Swoolly being modelled by the family and team at Scanlan Wools in Fremantle.

The Scanlan name has been well-known in the Western Australian wool industry for many years: Fremantle-based Scanlan Wools, established in 1986 by Peter and Margaret Scanlan, is a broker and merchant that has been buying and selling West Australian wool for nearly four decades.

More recently, with the help of their five daughters and the Scanlan Wools team, the company is not only marketing their clients' wool as a raw fibre, they are also directly creating demand for Western Australian wool through the manufacture and retail of wool sweaters through the Swoolly by Scanlan brand.

Classic, versatile wool products

The first step for the family into retail began in 2018 when Peter and Margaret's daughter Emily and her cousin Leanne launched a range of childrenswear products made from 100% Australian Merino wool. Then in 2020, the family launched a quality knitted sweater known as the Swoolly which is produced with a machine-washable worsted yarn made from 19.5-micron Western Australian Merino wool – soft, lightweight and comfortable to wear.

While the classic half-zip Swoolly for men and women continues to be a versatile wardrobe favourite, the product range has expanded

into other classic sweater styles, such as crew and V-neck, made with Western Australian wool. For women, there is also a 100% Merino wool tailored blazer and pants, and classic camel coat made from a 70% felted wool fabric – which are manufactured in Fremantle. Accessories include a 100% Merino wool baby blanket and beanie.

Emily Linke who oversees retail development at Swoolly by Scanlan, says the brand focusses on creating enduring designs that reflect the Australian lifestyle.

"We believe in quality over quantity, in being the opposite of fast-fashion, and making products that are versatile and will last a lifetime. Our sweaters are perfect for layering or wearing on their own, and their timeless and trans-seasonal design means they'll never go out of style," Emily said.

"Our products are all available to purchase via our website, but we are exploring options for wholesale partnerships in the domestic market and also looking at exporting into India."

Keeping things local

Emily says Swoolly by Scanlan uses wool from Scanlan Wools' own wool-growing clients in its sweaters which ensures traceability and a good provenance story.

"At Swoolly by Scanlan, we're proud to partner with farmers who share our values and respect for local ecosystems. Because we can trace where our natural fibre comes from, we can ensure higher quality as well as higher animal welfare standards and better land management.

"Consumers are increasingly interested in where their products originate. We can verify that the wool we use in all our sweaters is grown on sheep grazing the clean pastures of Western Australia and all our garments are designed right here in Fremantle. Our latest selection of women's apparel is also manufactured here."

With Swoolly by Scanlan continuing to expand its product range and markets, the brand acknowledges on its website the help that was provided by AWI when the brand was starting out.

"The assistance and expertise of the team at Australian Wool Innovation was crucial in starting our journey taking 'farm to fibre to fashion' – and on the zipper pull of every Swoolly proudly sits the Woolmark logo," Emily added.

More information: www.swoolly.com.au

MERINO SWIMWEAR ENTERS THE ARENA

Marking its 50-year anniversary this year, iconic Italian swimwear brand arena has showcased its inaugural collection of Merino wool swimwear for men and women in partnership with The Woolmark Company. The swimwear is part of a new beachwear collection for Spring/Summer 2024 which was presented exclusively at the Pitti Uomo tradeshow in Florence, Italy, at which two Olympic swimmers provided an endorsement of the products.



In pursuit of finding new markets for Australian wool, AWI has teamed up with Italian swimwear brand arena to create and market its inaugural collection of Merino wool beachwear for men and women.

With a presence in 128 countries, arena is a huge international swimwear company that last year recorded its highest ever revenue of €141 million [AU\$230 million], up 45% on the previous year.

Created in 1973 by sports visionary Horst Dassler (son of the adidas founder Adi Dassler and nephew of Puma founder Rudolf Dassler), arena is this year celebrating its golden anniversary. The company has been famous throughout its 50-year history for its performance swimwear and sponsoring elite athletes from Mark Spitz to Shane Gould.

This year, arena has added to its core swimwear offering the company's first lifestyle collection, the Spring/Summer 2024 Beachwear Collection, which contains ultralight Merino wool swimwear for men and for the first time ever women. Three different innovative Woolmark-certified wool blend fabrics using Australian Merino wool yarns (30-60%) have been developed for this collaboration, with the products all designed in Italy.

The initiative follows arena having previously been introduced by The Woolmark Company to the versatility and benefits of Merino wool.

Ambassadors for arena's Beachwear Collection include 2022 World Champion of the 100-metre breaststroke, Nicolò Martinenghi from Italy, and 2020 Olympic 50-meter freestyle bronze medalist Bruno Fratus of Brazil. Both were in attendance at

"With its exceptional natural properties, Merino wool sits high on the radar of the sports and performance world, and is increasingly prevalent in the new market of aquatic activities."

Francesco Magri, AWI's Central & Eastern Europe Regional Manager

the Pitti Uomo trade in June to promote the collection when it was previewed to trade visitors. More than 17,000 visitors including 11,900 buyers from companies across the world attended the trade show.

Natural partner in a new market for wool

Deputy CEO of arena Giuseppe Musciacchio says the company intends to position itself with this collection as the reference brand at a medium-high level in the beachwear-lifestyle market.

"We believe that our know-how in the world of competitive swimming constitutes a strong distinctive trait, in order to talk to that part of the market where performance and lifestyle increasingly go hand in hand," he stated.

"For us, the adoption of innovative, sustainable, and surprising fabrics, such as a wool base, represents a winning path. In The Woolmark Company, we have found an excellent partner, with whom we can walk that path together."



Olympian Bruno Fratus providing a testimonial of the Merino shorts at the Pitti Uomo tradeshow in June.

Merino wool's versatile benefits

Offering natural breathability, fast-drying capabilities, elasticity and UV protection, Merino wool is both an innovative performance fibre and a 100% natural, renewable and biodegradable choice for sportswear that does not contribute to microplastic pollution of the sea.

AWI's Central & Eastern Europe Regional Manager, Francesco Magri, says Merino wool is the ideal choice for arena's future direction, aligning with the growing demand for wearable performance with the environment in mind.

"The collaboration with arena once again underlines the versatility of wool, even in unexpected contexts such as beachwear. And it's precisely the intrinsic characteristics of this extraordinary fabric, along with it being a natural fibre, that makes it a key ingredient that can offer technical performance as well as representing a responsible choice for the planet," he said.



MERINO A RUNAWAY WINNER IN KOREA

The Woolmark Company this year sponsored TNF100 Gangwon in Korea, a 100km ultramarathon running event organised by leading outdoor brand The North Face, positioning Merino wool as a high-performance fibre for sportswear.



Winners of the TNF100 wearing their Optima jackets

The North Face is the top sports and outdoors brand in Korea, with annual sales of A\$950 million in 2022, a 41% increase from the previous year. It is operated by Youngone Corporation, a leading global manufacturer of sports and outdoor clothing.

In May, The Woolmark Company sponsored the annual TNF100 ultramarathon, held in the Gangwon province of Korea, in which more than 2,000 runners took part. The event comprises three races of 100km, 50km and 10km.

The primary objective for sponsoring the event was to showcase a specially designed Optima jacket to customers whilst also highlighting the suitability of Australian Merino wool for sportswear.

The Optima jacket is made from a high-performance 100 per cent Australian Merino wool fabric that is resistant to water and wind, while retaining all Merino wool's fine properties such as breathability. It is an immensely dense fabric due to the combination of its unique weave and fine 16.5-micron yarn.

This particular Optima jacket, made in collaboration with The North Face, was presented as prizes to the top 20 runners in the TNF100.

"By collaborating with the largest sports and outdoors brand in Korea in this campaign, we were able to promote the natural benefits of Merino wool in sportswear – including breathability, thermoregulation and odour resistance – to a wide audience of consumers who take a keen interest in the performance benefits of the products they purchase."

**Samuel Cockedey, AWI Regional Manager
Japan & Korea**

A booth co-run at the event by The Woolmark Company and The North Face used displays, banners and video to promote the benefits of Merino wool in sportswear. More than 800 competitors visited the booth, where they could purchase The North Face's Merino wool products.

However, the main promotional benefits of The Woolmark Company's involvement in the event were the result of influencer marketing and a media buy.

The Woolmark Company engaged influencers to conduct social media marketing of Merino wool and the Optima jacket at the event.

This included a fashion-forward celebrity who showcased her stylish curated outfits with the Optima jacket, plus a host of high-profile running influencers, who had participated in the event, wearing the Optima jacket. The Woolmark Company also collaborated with influential magazines in Korea, *GQ Korea* and *W Magazine*, to create content about Merino wool and the Optima jacket at the event.

There were more than 10 million digital impressions (the number of opportunities people had to view the campaign) from these activities, which is more than 10 times the campaign's target.

Furthermore, the media exposure of releases distributed by The North Face, reported on 97 online news sites, achieved a total reach (the total number of people who saw the content) of more than 70 million.

"We greatly appreciated The Woolmark Company's effective promotion of the TNF100 marathon through influencer marketing and media buying efforts. Thanks to its marketing activities, we obtained tremendous promotional effects for this marathon event," said Manager of Marketing at The North Face Korea, Mr TaeHyuk Heo.



Two of the many social media images posted by influencer-runners at the TNF100 event.

PEAK PERFORMANCE WITH NEW KNITTED OUTERWEAR

PHOTO: Andre Schoenherr

The Woolmark Company and knitting machine manufacturer Shima Seiki Italia have united with two Italian partners to create a new performance wear capsule collection for mountain and snow sports, which is being showcased at trade shows across the world.

The new capsule collection comprises five pieces that highlight Merino wool as the ultimate natural fibre for mountain and snow performance wear.

The collection – comprising jackets and trousers, plus backpack and gloves – was launched at the world’s largest textile machinery exhibition (ITMA) in Milan in June and is also being shown at other trade shows to provide inspiration for manufacturers and brands along the textile supply chain.

The garments are a showcase of the latest WholeGarment® knitting technology from Shima Seiki as well as the performance of Merino wool yarns.

The concept for the collection was the idea of The Woolmark Company and Creative Director of Shima Seiki Italia, Vittorio Branchizio, and follows on from previous collaborative projects

between the two companies that involved protective wear and tailored knitwear.

Most pieces in the new collection are created with Shima Seiki’s WholeGarment® knit machines which eliminate the need for cut-and-sew, meaning only the required amount of fabric is used, and it also minimises the number of seams thereby providing the ultimate in comfort.

The collection utilises innovative technologies, including 3D membrane and bonding technology, provided by the project’s two collaborating Italian partners: H-Dry provided the 3D lamination of a waterproof and breathable membrane in the collection, and Macpi provided the bonding technology to support the application of the membrane.

AWI Research & Development Manager for Europe, Birgit Gahlen, says the collection

unites the natural performance properties of Merino wool with the latest technological innovations in the textile industry.

“Merino wool not only has the eco-benefits of being a natural, biodegradable and renewable fibre, but it also has many performance advantages such as thermoregulation, breathability, durability and elasticity that make it highly suitable for outdoor pursuits in the mountains,” Birgit said.

“Advances in technology by our collaborating partners have led to innovations with Merino wool, exemplified by this new performance outerwear and accessories, which we are now showcasing to brands with the aim that this will lead to the use of more Australian wool in these markets.”

More information: www.woolmark.com/knit-performance



This men’s performance jacket is created using the WholeGarment® knitting process in 100% Merino wool to provide high environmental credentials, with a waterproof and breathable membrane.



This jacket for women consists of three layers. Texture is created in the outer layer using a ‘fancy yarn’ made from 87% Merino wool blended with 13% polyamide, while the internal layer consists of 75% Merino wool blended with a 25% bioceramic yarn that heightens the management of body temperature. The mid layer of the jacket consists of a membrane that enhances protection against wind and water.



Accessories are also included in the collection, comprising a backpack (pictured) and gloves.

NORWAY GOES THE MERINO WAY

PHOTO: KontraPixel / Jana Erb

Norway continues to be a country that excels in the development of innovative Merino wool outdoor apparel, exemplified by the winning of recent awards for two new products by Woolmark licensees from Norway: Devold and Aclima.

Devold: Expedition Arctic Pro base-layer



Woolmark licensee Devold of Norway was founded in 1853. Working with wool throughout its 170-year history, the company today produces apparel for sports and outdoor enthusiasts.

The company's new Expedition Arctic Pro base-layer has been awarded an ISPO Award, which is a major seal of approval from ISPO, the world's leading sports and outdoor trade show. The base-layer also received an honourable mention in the 'She is Outdoors' 2023 women's gear awards. The men's and a women's version were launched this year in time for the northern hemisphere autumn and winter.

The Expedition Arctic Pro base-layer consists of a combination of three different fabric/knit structures – a wool terry, a two-layer wool knit with silk, and a Merino wool mesh – which are each located in the parts of garment where they can most benefit the different body zones of the wearer.

The soft and thick wool terry covers the upper part of the torso around the heart where most of the insulation is needed. The main part of the base-layer is a two-layer wool knit, where the inner layer is Merino wool and the outer layer is a blend of 90% Merino wool and 10% silk – this allows moisture to be transported from the inner layer to the outer layer where it can evaporate. The third structure is a mesh made of Merino wool, which is used only in the sweat zones of the body – under the arms

and in the lower back – which helps keep the body surface dry and wick moist air and sweat to the outside.

The ISPO Award jury listed the following attributes as reasons why the garment won the award: highly warm, moisture regulating through body mapping, antibacterial and antistatic, fast drying, consists only of natural fibres and is biodegradable, and versatile because it can also be used as a mid-layer.

"This base-layer shows how versatile Merino wool can be processed. From the fine mesh to the wool-silk blend to the cuddly soft wool terry, Devold proves its enormous knitting expertise."

Jury of the ISPO Award

"We are so happy and humbled to receive the ISPO Award. It means so much to us as a brand that people out there really see and understand all the fantastic properties the wool is capable of, just by using it in different ways," said Devold Designer Christine Haraldstad-Sindum.

More information: www.devold.com

Aclima: ReBorn Terry Pullover

Founded in 1939, Norwegian company Aclima is a Woolmark licensee that specialises in making innovative and functional Merino wool clothing for the outdoor sports market.

The company was this year presented with the prestigious Sustainability Award at the Scandinavian Outdoor Award for its ReBorn Terry Pullover, which is available in store this month.

The hooded pullover, which has an integrated neck warmer/protector, not only has a functional design but is crafted using recycled wool off-cuts sourced from the company's production facility.

"The ReBorn collection is all about taking leftover, high-quality wool from our own factory and giving it a new life. The Pullover is made with an innovative material that Aclima developed – it has a cozy terry knit exterior and a soft brushed interior that helps regulate your body temperature," said Aclima's Marketing Manager, Ole Magnus Halvorsen.

"The Pullover is designed to be comfortable and versatile, with a relaxed fit that's perfect for anyone. It is suitable for outdoor activities all year round, whether you're hiking through rugged terrain or simply relaxing by a cozy campfire on a chilly evening."

"The ReBorn Terry Pullover is one of those very cuddly garments everybody loves to touch and wear. The jury concluded that the Aclima ReBorn Terry Pullover is a sustainable and durable choice that looks good on everyone."

Jury of the Scandinavian Outdoor Award

The Pullover contains 63% wool recycled from wool offcuts, plus recycled polyamide and recycled polyester for extra durability, ensuring low environmental impact.

Furthermore, the garment is not re-dyed, but retains the colour from the leftover material, saving both water and chemical usage.

The ReBorn collection also includes a Terry Jacket and Terry Vest, as well as LeisureWool ReBorn shirts.

More information: www.aclima.com



SALOMON PUTS BEST FOOT FORWARD WITH MERINO

Teaming up with The Woolmark Company, leading sportswear brand Salomon has introduced Merino wool into its footwear range. Salomon's new Pulsar PRG Knit sneaker is an upgrade of the brand's popular Pulsar PRG shoe, which now has a lightweight knitted upper that incorporates Merino wool.



Salomon's new Pulsar PRG Knit sneaker that incorporates Merino wool in its upper.

Salomon is a leading international sports and outdoor brand based at Annecy in the French Alps. Founded in 1947 as a maker of ski gear, Salomon now manufactures products for various activities including trail running, hiking, climbing and skiing. Its products are sold across the world.

In 2015, Salomon launched its Sportstyle footwear sub-brand that combines performance-inspired design with city style. It is Salomon's fastest growing segment and is aimed at a younger more mainstream urban audience buying sportswear.

Salomon has recently made several sustainability commitments, including adding more natural fibres into its product range. This has led to the development with The Woolmark Company of the Pulsar PRG Knit, Salomon Sportstyle's first Merino wool sneaker, which was last month launched globally.

The unisex sneaker has an upper that includes Merino wool. In addition to being a 100% natural, renewable and biodegradable fibre,

"When updating the Pulsar PRG for cooler temperatures, it was obvious for us to work with wool to keep the sneaker's lightness while bringing warmth and a new touch and feel to the model."

Maina Souviron, Product Line Manager, Salomon Sportstyle

the Merino wool offers thermoregulation, moisture management and breathability properties, thereby providing performance benefits as well as eco benefits.

The sneaker has gained The Woolmark Company's prestigious Wool Blend Performance certification, guaranteeing durability, performance, fibre content and exacting quality standards.

Global marketing of the sneaker

In addition to assisting with the development of the Pulsar PRG Knit, The Woolmark Company has also collaborated on marketing the sneaker worldwide, during August and September, aimed mainly at younger audiences (20-40 years) in the urban and sports communities. The marketing has included a digital and social campaign, plus displays of the sneaker in Salomon's four key flagship stores in China, highlighting the natural Merino wool used in the shoe and its comfort benefits.

AWI CEO John Roberts says the project is an example of how AWI is collaborating with a leading brand in the global market to raise awareness of Merino wool and build demand for new Merino wool products and Australian wool.

"Salomon has long been an international leader in the sports and outdoor industry, and we are pleased to help the brand put its best foot forward by incorporating Merino wool into its Sportstyle range for the first time," he explained.

"Merino wool's inherent performance and environmental benefits have been driving new opportunities for the fibre in the footwear market, and Salomon's new Pulsar PRG Knit with its Merino wool upper is a fantastic example of innovation and product development."



The marketing of the shoe includes a digital and social campaign.

"This collaboration with leading global brand Salomon is an example of how AWI is introducing the use of Merino wool into new markets to build demand for Australian wool."

John Roberts, AWI CEO

The use of wool in the footwear market is a relatively new development that has been driven by cooperative activity between The Woolmark Company and innovative manufacturers, such as Salomon on its Pulsar PRG Knit sneaker.

Breakthrough developments by leading spinners to create wool yarns suitable for footwear, teamed with advancements in technology, have led to innovative product developments that offer a natural solution to a market so heavily dominated by synthetic materials. This has led to more brands now using wool in footwear, which has increased the consumption of wool in the global footwear market.

The collaboration between The Woolmark Company and Salomon came about partly as a result of a relationship built when Salomon was the partner of the 2022 Woolmark Performance Challenge, the competition for tertiary students to develop innovative new product applications for Merino wool within the sports market.

More information: www.salomon.com

WOOL HELPS YOU STAY 'COOL UNDER PRESSURE'

PHOTO: gorodenkoff

A new AWI-funded study run by the University of Adelaide has shown that people wearing wool perform better during cognitively stressful tasks than those wearing synthetics.

Many activities and jobs involve performing mentally difficult tasks under stressful situations. For those in more high-pressure occupations such as the health, defence and space industries, just a modest improvement in cognitive performance can mean the difference between life and death.

So, as part of its strategy to build further scientific evidence of wool's benefits for human health and wellness, AWI asked the question: Does the composition of the textiles that people wear have any effect on cognitive performance?

"Up until now, there had been very few studies to indicate whether textile type in clothing has an impact in this respect," said AWI Program Manager, Fibre Advocacy & Eco Credentials, Angus Ireland.

"However, human cognitive performance has already been shown to be sensitive to heat, humidity and temperature – and failure to effectively regulate body temperature and support physical comfort has been shown to diminish cognitive performance," Angus said.

"Given wool's ability to maintain a more stable

microclimate between a garment and the skin, AWI recently invested in a project with the University of Adelaide to scientifically evaluate whether wearing a wool garment positively affects performance during cognitively stressful tasks, in comparison to when wearing a synthetic garment."

University of Adelaide study

The study involved 62 participants (28 male, 34 female) with a median age of 22.61. All participants had either completed or were completing a degree or other tertiary qualification.

Under controlled laboratory conditions, the study investigated the impact on cognitive performance of wearing an upper body base-layer made from wool versus one made from synthetic fibres.

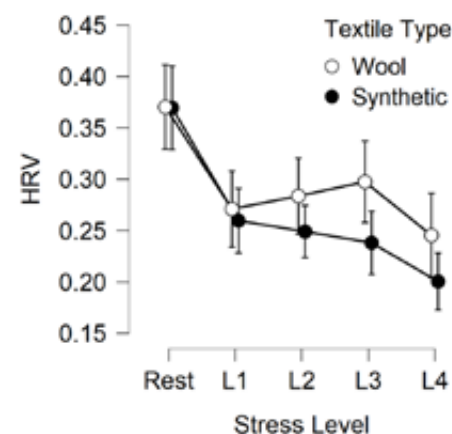
The researchers hypothesised that wool would provide the participants with greater efficacy in adapting to stress during cognitive testing, and that this would be reflected in participants' (1) greater accuracy, (2) faster responses, and (3) decreased heart rate variability (HRV).

Results show wool outperforms synthetics

The experiment confirmed that at higher levels of problem difficulty, wearing wool allowed participants to perform better on the arithmetic problems they were presented with during testing, specifically in terms of response time and when corrected for a speed-accuracy trade-off.

Wool's benefits were also confirmed by the HRV data, which showed that participants were slightly higher in HRV when wearing wool. This indicates that they had adapted more effectively to stress when wearing wool compared with synthetics.

Figure 1: HRV across stress levels and textile types, which shows that wool outperformed synthetics, particularly in the higher difficulty level conditions



"The researchers' examination of the participants' accuracy, response time and HRV showed that, as temperature increased, the effect of textile type on cognitive performance became more apparent. It clearly showed that wearing a wool garment helped the most in mitigating the impact of stress on cognitive performance," Angus said.

"Through studies like this, AWI is building and extending the scientific basis for wool's health and wellness credentials. Importantly, AWI is communicating these benefits through its marketing arm, The Woolmark Company, to the textile supply chain and consumers to help build demand for Australian wool."



PHOTO: Tammy Hanratty

Results from a new AWI-funded study show that wearing wool helps people perform better at cognitively stressful tasks, which could make a vital difference especially to those working in high-pressure occupations.

AUSSIE MERINO WOOL SHOWCASED ON US TV

The Woolmark Company recently teamed up with popular US television talk show *The Balancing Act* and US womenswear brand Wool& to promote the natural benefits of Australian Merino wool, which increased sales of the brand's Merino wool apparel.



The *Balancing Act* TV show host **Christina Nicholson** with Wool& Community Manager **Rebecca Eby** showcasing a range of Wool& apparel made from Australian Merino wool.

The *Balancing Act* is America's premier morning talk show with more than 20 years of success hosted on Lifetime Television. It is one of the most watched television channels in the United States, reaching 83 million households with an episodic viewership of 350K+ per episode.

The Woolmark Company partnered with The *Balancing Act* and Portland-based apparel brand Wool& on a live TV segment titled 'Sustainable Clothing: Understanding the Impact of Natural Fibers for your Health and the Planet', broadcast during Earth Day month in April 2023.

The *Balancing Act* and Wool& share a similar audience, females in the age range of 25-55 who are interested in learning new ways to improve their overall wellbeing.

"When purchasing new clothes, checking the label is a great place to start as it's essentially a brand's promise to you, the buyer. Choosing natural fibres over synthetic fibres can make a huge difference in protecting our land, waterways and ocean against pollution. Also, it just feels better to wear natural breathable fabrics."

Christina Nicholson,
The *Balancing Act* TV show host

The segment aired twice, and was promoted across The *Balancing Act* and Wool& social channels and web. It received strong engagement from both brands' audiences,

and succeeded in creating consumer confidence in purchasing Merino wool, demonstrated by the uplift in Wool& sales after the segment's airing.

The Community Manager of Wool&, Rebecca Eby, spoke on the show about how wool is a 100% natural, renewable and biodegradable fibre and therefore better for the environment. She also highlighted that the Wool& clothes are lightweight, soft next to the skin, and are odour resistant meaning they require less laundering.

Wool&, which was launched in 2018 as the sister brand of Wool&Prince (see right), has previously worked in partnership with The Woolmark Company to develop a traceable supply chain using Merino wool sourced from Australia.

"Wool& is partnered with Woolmark which is the global authority on wool, so our wool meets really high standards."

Rebecca Eby, Wool&, speaking on The *Balancing Act*

Wool& continues to expand its range of very wearable, everyday apparel – dresses, tops and bottoms – and increase its consumption of Australian wool as the demand for its clothing continues to build.

More information:
www.wooland.com
www.thebalancingact.com

Wool&Prince menswear brand

Wool&Prince was famously launched in 2013 when its founder, Mac Bishop, successfully wore his Merino wool shirt for 100 straight days without washing or ironing, proving the easy-care and versatile nature of the fibre.

From a single shirt product, the brand's range has expanded massively to include several shirt styles, other base-layer tops (including T-shirts, Henleys, polos), mid-layer tops (including sweatshirts, hoodies and pullovers), and other products such as shorts, sweatpants and underwear. But high-quality Australian Merino wool remains at the heart of the brand.



100% Merino wool button down shirt.

ALL-DAY COMFORT WITH AU NATURAL UNDERWEAR

American brand Au Natural has partnered with The Woolmark Company to develop and launch the first Woolmark-certified underwear in the US. Merino wool's natural benefits provide the underwear with comfort and wearability across all the day's activities, from the office to the gym and beyond.

Au Natural is a company founded by sisters Christina Vilicich, Erika Sliwak and Rebecca Sliwak, who have created and launched a collection of Merino wool underwear that bridges the gap between comfort and style. The intimate apparel has been designed so it is versatile enough that women can wear it for any activity.

The sisters say standard underwear on the market isn't designed for comfort across all activities, which complicates getting ready in the morning.

"Prior to starting Au Natural, we dreaded the morning ritual of searching through our top drawer for a pair of undies that coincided with all our plans and what we were wearing that day. Whether it was a commute to work, a Pilates class, Saturday night out, or a long travel day, there wasn't one pair that worked for everything," they said.

After surveying hundreds of other women, the sisters learnt they weren't alone. "That's when we decided to create Au Natural. We wanted to wear undies that were comfortable and versatile, so we didn't have to think about it each morning."

"The Woolmark Company went above and beyond to help us optimise our supply chain, connect us with the world's best designers, and ensure we felt supported throughout the end-to-end development process."

Founders of Au Natural

Merino the ideal fibre

Au Natural partnered with The Woolmark Company to develop the incredibly soft Merino wool underwear, launching in June its new collection of styles and colours ready for the US summer.

Inspired by classic lace designs but reworked in seamless jacquard Merino wool fabric, the collaboration has paired ultrafine Merino wool blend yarn from spinner Südrolle with research and testing by innovative knit designers Studio Eva x Carola, as well as expert input from The Woolmark Company's technical team. The result is stylish and dependable underwear for the modern woman.

"The Merino wool fibre is complex and we wanted technical expertise when developing with it. We turned to The Woolmark Company for its extensive knowledge not only about knitting the material itself and product development, but also to assure the product quality through its rigorous certification process," the sisters said.

Au Natural has the first Woolmark-certified underwear in the US, providing quality assurance for customers.

"The Woolmark Company's high standards of quality coincide with our brand belief in fewer, higher quality products and sustainable shopping overall. We are honoured that Au Natural is the first US Woolmark-certified underwear. We know receiving their stamp of approval will help our customers understand just how high-quality the product is," the sisters said.

"We are grateful The Woolmark Company came alongside us and were so generous with introductions, technical advice, and partnering throughout the R&D process. It truly shows their priority is innovation and getting Merino wool's amazing benefits into the hands of consumers."

Au Natural's Merino wool underwear is available for US customers to purchase online and at various pop-up events in New York City.

More information:

www.woolmark.com/aunatural

Merino wool's benefits for underwear

- **Breathable** – Merino wool is one of the most breathable fibres, even providing comfort during workouts and hot summer days.
- **Odour resistant** – Merino wool absorbs and locks away odours, only releasing them when washed, thereby minimising odour.
- **Softness** – Merino wool is renowned for being very fine and very soft next to the skin.
- **Elasticity** – Merino wool works in harmony with the wearer's body due to the fibre's excellent natural elasticity.



Au Natural's new versatile collection underwear uses Merino wool to provide superior comfort and style.

INTERNATIONAL WOOLMARK PRIZE 2023

The winners of this year's International Woolmark Prize were announced in May at a special event at which the world's best emerging design talents showcased their Merino wool collections. This illustrious fashion award and talent development program generates long-term demand for Australian Merino wool by building and strengthening the reputation of the fibre as the ultimate ingredient of sustainable luxury fashion.

Since its inception in the 1950s, the International Woolmark Prize has been awarded to young fashion designers that have gone on to become some of the most era-defining creatives of their generation: from Karl Lagerfeld and Yves Saint Laurent to Giorgio Armani and Ralph Lauren.

Relaunched in 2012 by AWI's marketing arm, The Woolmark Company, the International Woolmark Prize is an award for the world's most promising design talent. During the program, the designers develop and present their most innovative designs to a panel of judges comprising distinguished industry heavyweights. The designers' collections must be made from at least 70% Australian Merino wool.

But the International Woolmark Prize program is a lot more than a fashion design award.

The program provides the international designers with education, mentorship, networking opportunities, early-stage funding, global wool supply chain access and commercialisation. **Importantly, it generates long-term demand for Australian Merino wool** by increasing the knowledge of and lifetime loyalty to the fibre amongst the award's designers and alumni across the globe.

Furthermore, the phenomenal interest in these awards from fashion communities and media globally has helped put wool back on the agendas of a broader range of fashion designers, manufacturers, brands and retailers, and consequently into retail stores for consumers to purchase.

"Ultimately, the International Woolmark Prize connects our Australian woolgrowers with the global fashion and textiles industry, while highlighting the beauty, versatility and modernity of Australian wool," said AWI CEO John Roberts.

"The winners and finalists become imbued with a life-long love for wool. Karl Lagerfeld is a prime example, and more recently, Gabriela Hearst – who won the International Woolmark Prize here in Paris in 2017 – continues to be a wonderful champion of the fibre as Creative Director at luxury fashion house Chloé.

"We are proud of the relationships fostered between our finalists, prestigious judging panel and supply chain network. Tapping into these up-and-coming designers and their networks provides an incredible opportunity to educate both industry and consumers of the benefits of Merino wool, driving awareness, education and purchase intent, which increases the demand for Australian wool."

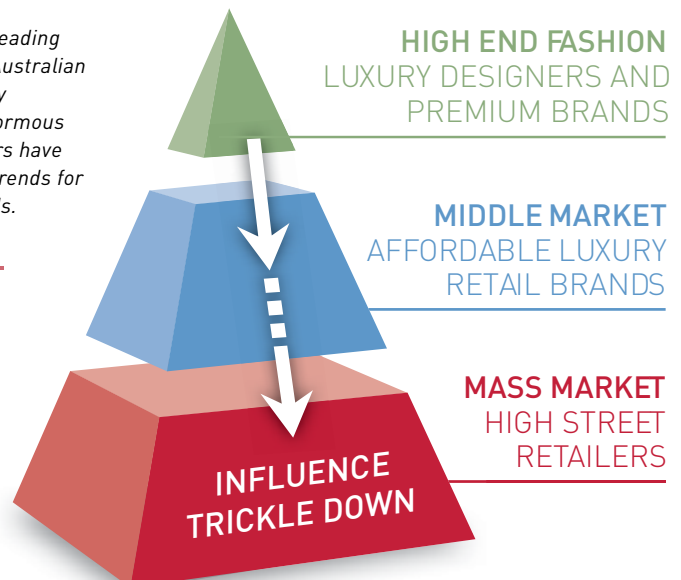


Winner of the 2023 International Woolmark Prize Adeju Thompson of Lagos Space Programme (centre), winner of 2023 Karl Lagerfeld Award for Innovation Amalie Røge Hove of A. ROEGE HOVE (left), and winner of the Woolmark Supply Chain Award Borre Akkersdijk of BYBORRE (right).

Aims of the International Woolmark Prize

1. Drive Australian wool sales on a global scale.
2. Increase awareness of Merino wool and the Woolmark brand.
3. Educate and mentor emerging designers about wool.
4. Build a global network of wool advocates.
5. Generate new business leads for AWI and the wool supply chain.

Connecting the world's leading fashion designers with Australian Merino wool is extremely important due to the enormous influence these designers have in setting global textile trends for mainstream retail brands.



The 2023 International Woolmark Prize journey

The finalists for this year's award were A. ROEGE HOVE (Denmark), BLUEMARBLE (France), Lagos Space Programme (Nigeria), Marco Rambaldi (Italy), MAXXIJ (South Korea), Paolina Russo (UK), R H U D E (USA) and Robyn Lynch (Ireland).

The finalists were announced in November 2022 through a PR and social strategy. Local finalist announcements amplified the announcement within each finalists' city.

All eight finalists were then supported by The Woolmark Company's Innovation Academy, a fast-track mentoring and education program that offers unparalleled access to International Woolmark Prize partners, manufacturers and mentors across the supply chain.

Each of the finalists presented Merino wool collections that showcased a commitment to upholding the prize's pillars of product excellence, innovation, supply chain transparency and sustainability. A content and social strategy was used to reveal in video and imagery the finalists' collections, creating excitement and anticipation in the lead up to the final event and winner announcement.

The winners were selected by an illustrious panel of judges and were announced at a special event in May in Paris, at which the finalists showcased their collections to 600+ industry members and target brands in a showroom format. With a combined total of more than ten million followers, this year's event talent (including judges and ambassadors) amplified their involvement in the prize to a large and engaged audience.

"The speciality of the Woolmark Prize is it's the only fashion award celebrating the fibre and materials and nature – the animals, the soil, all the farmers in the supply chain. It's not only celebrating human creativity but also nature's creativity," explained one of the 2023 judges, Shaway Yeh, who is one of the most influential media and opinion leaders on fashion and culture in China.

All the finalists will now continue their International Woolmark Prize journey, joining a prestigious alumni of more than 400, and will have the opportunity to be stocked in some of the world's leading stores, via the International Woolmark Prize Retailer Network.

And the winners were...

2023 International Woolmark Prize winner: Lagos Space Programme, from Nigeria

Designer Adeju Thompson said at the ceremony that winning the award is a life-changing opportunity for him. "It means that things will be easier for me; coming from Nigeria there's no support. To have recognition from The Woolmark Company – wow, I'm so speechless and I'm looking forward to the future," he said.

Judge Elizabeth von der Goltz, who is CEO of fashion boutique Browns based in London

and Chief Fashion and Merchandising Officer at global luxury fashion platform Farfetch, said, "[The garments] are crafted beautifully and look like something you could buy in the most luxurious retailers in the world. What I loved was the story behind the brand which is so important, and what they're bringing to light in their community in Nigeria."

Karl Lagerfeld Award for Innovation winner: A. ROEGE HOVE, from Denmark

Designer Amalie Røge Hove said the dedication that the brand has shown towards innovation and sustainability has paid off, and she couldn't be prouder. "We've been talking about how we want to invest in innovation and new things in the studio. Some of these things were out of reach but something like this makes it really possible. It really means everything," she said.

A. ROEGE HOVE impressed the judges with the freshness of the collection and the attention paid to the supply chain and manufacturing process. "The way she constructed her collection and the emphasis on development. It felt new to me," said judge Pieter Mulier who is Creative Director at Parisian fashion brand Alaïa.

Woolmark Supply Chain Award winner: BYBORRE, from The Netherlands

Amsterdam-based textile innovation studio BYBORRE was recognised for the invaluable contribution it has paid to finalists across the past few years. "The International Woolmark Prize is an important stepping stone for the industry and a great example of how we can better support and promote future talent who are working on improving the world of tomorrow," said BYBORRE founder Borre Akkersdijk.

More information: www.woolmarkprize.com

The 2023 program in figures

Earned media results:

- 4,600+ media clippings (+56% YOY)
- 16.8 billion reach (+39% YOY)
- \$16.8 million earned media value (+30% YOY)

Social media results:

- 9.5 million+ social video views
- 8.4 million+ social reach
- 28 million+ social impressions



INTERNATIONAL
WOOLMARK PRIZE

Evaluation of 10 years of the International Woolmark Prize program

AWI's Measurement & Evaluation unit has conducted an assessment of the International Woolmark Prize (IWP) program's impact during the ten years since the program was reintroduced in 2012 through to last year's program, ie 2012/13 to 2021/22.

The assessment estimated that for every \$1 invested by AWI over the past 10 years, there has been an average \$2.41 return on investment.

2.41

Benefit: Cost ratio

The benefit generated through the project will help woolgrowers through increased demand for wool which is likely to be driven by changed purchase behavior, consumer demand and preference for Merino wool as a natural, sustainable fibre, as well as through partnerships and new business opportunities that are expected to emerge for AWI and for the finalist designers.

The assessment also estimated that there were more than five million kilograms of wool that the IWP program had influenced during the past 10 years.

The assessment also determined that during the past 10 years, there were an average of:

- **300 designer IWP applications per year** with an average of 10 IWP finalists.
- **10 extra products per year** that each IWP alumni has created using at least 50% wool.
- **60 IWP retail partners per year**, who assist with the commercialisation of finalists' collections.
- **103,890 web traffic users per year** (rising from 23,195 in 2012/23 to **225,885** in 2021/22).
- **1,095 press clippings per year** (rising from 109 in 2012/23 to **3,016** in 2021/22).
- **50 million impressions per year** (the number of times coverage of the IWP program was seen online).

More information: View AWI's impact assessment report of the International Woolmark Prize, plus reports on other AWI projects, at www.wool.com/measuring-performance

WOOL EDUCATION AT THE MET IN NEW YORK

The Woolmark Company provided an education about wool to young visitors at a series of four events hosted by the popular and influential Metropolitan Museum of Art (The Met) in New York.



Teens learning about the benefits of wool at the Metropolitan Museum of Art in New York.

Founded in 1870, The Met is the largest art museum in the Americas, the eighth most-visited art museum in the world and the third most visited US museum.

Following the opening of the 'Karl Lagerfeld: A Line of Beauty' exhibition held at The Met in May (see box below), The Woolmark Company undertook a series of interactive, educational initiatives aimed at engaging with Gen-Z audiences at four events hosted by The Met:

Teens Take the Met – 12 May

The annual Teens Take the Met event focuses on connecting and engaging with Gen-Z through education, interactive art and creativity. This year it generated a record attendance. At the event, The Woolmark



Company showcased an interactive fabric station so that teens could construct their own needle-felted creation and explore wool's properties and benefits through touch and visual assessment. Live talks demonstrated wool processing, from fibre to yarn to fabric, and highlighted the range of applications of wool in fabric structures such as faux fur, mesh, print and others.

College Night – 17 May

In March, undergraduate and graduate student fashion designers submitted preliminary designs inspired by the Karl Lagerfeld exhibition. Chosen finalists were judged and the winners announced at College Night held in May. The Woolmark Company's participation

in the evening comprised an event called 'Sustainable Style' at which students got an up-close perspective on the science and skill involved in working with wool.

Museum Mile Festival – 13 June

The iconic Museum Mile Festival is a free annual event where several museums along 5th Avenue in New York open their doors to the public for the evening. The Met is one of the participating museums. Similar to the Teens Take the Met event, The Woolmark Company held a hands-on needle felting station for the public to learn more about working with wool.

Teen Studio – 1 August

Targeted at 15–18-year-old students, Teen Studio is a series of art-making workshops at which students are encouraged to unleash their creativity during a fashion workshop inspired by the 'Karl Lagerfeld: A Line of Beauty' exhibition and create their own fashion designs. The Woolmark Company presented the Wool Appreciation Course to the students and discussed the career opportunities in textiles and the wool industry. Following the presentation, The Met's Teaching Artist, Rebecca Sutton, who worked at all the above events with The Woolmark Company, taught the students how to needle felt with wool and bring their knowledge of wool to life.

Event press releases mentioning The Woolmark Company were distributed to thousands of media outlets and the events were promoted and reported via The Met's social media channels, receiving two million impressions (the number of times it was seen online). The Woolmark Company also captured wool-focussed content from The Met's costume conservator Glenn Peterson, which was published alongside The Met's social media accounts.

Karl Lagerfeld at The Met

As reported in the June edition of *Beyond the Bale*, the theme and dress code for this year's Met Gala was based on The Met's Costume Institute spring 2023 exhibition 'Karl Lagerfeld: A Line of Beauty', a posthumous retrospective of the German fashion designer's work.

Karl Lagerfeld is one of the International

Woolmark Prize's (see pages 48–49) most celebrated alumni, having won the prize in 1954, when it was known as the International Wool Secretariat prize.

In recognition of Karl Lagerfeld's association with wool, The Woolmark Company and US fashion brand Bode – which won the inaugural Karl Lagerfeld Award for Innovation as part of the 2020 International Woolmark Prize – teamed up to reimagine Karl Lagerfeld's

prize-winning wool coat from 1954, which was worn by Canadian designer, activist and author Aurora James at this year's Met Gala. The Met Gala is one of the world's most prestigious and glamorous fashion events.

There were **320+ earned media clippings** about The Woolmark Company initiative, worth **\$2 million in value**, with a reach of **2.3 billion people** (the potential number of customers the campaign could reach).

TRADE SHOW PRESENCE SHOWCASES AUSSIE WOOL

AWI's subsidiary The Woolmark Company exhibits at the world's most important international textile trade shows to inspire the world's leading manufacturers, brands and retailers to include wool in their upcoming collections.



Trade shows are a unique opportunity for The Woolmark Company to connect with key supply chain partners.

With the global emergency caused by the COVID pandemic now ended, face-to-face trade shows have almost fully resumed. They are once again providing opportunities for The Woolmark Company to continue and develop business-to-business relationships with the world's leading textile and apparel companies.

The shows are like a mecca for leading product developers, brand buying and sourcing teams, designers, manufacturers and retailers from across the world.

"Attending international trade shows is vital for The Woolmark Company to effectively showcase and promote the natural and performance benefits of Australian wool, our new product and process developments as well as The Wool Lab sourcing guide [see overleaf]," explained AWI General Manager, Processing Innovation & Education Extension, Julie Davies.

"Our presence provides an important source of leads for business development as well as the opportunity to support our trade partners. It enables in-depth discussions with key manufacturing partners and those within the textile supply chain, to bring wool to the forefront of their minds for inclusion in their future collections and product ranges.

"Ultimately, our activities at trade shows aim to grow profitable demand for wool for the benefit of Australian woolgrowers."

The Woolmark Company's product innovations on display at recent trade shows have included the latest brand collaborations with the Luna Rossa Prada Pirelli sailing team, Nissan's Formula E motor racing team and Volvo Cars, Shima Seiki Italia on snow sports apparel (see



PHOTOS: Matteo Mastrogiuseppe

Trade shows enable promotion of The Wool Lab sourcing guide and showcase the latest innovative wool developments.

page 42) through to the award-winning designs from The Woolmark Company's pioneering International Woolmark Prize and Woolmark Performance Challenge.

"With a global interest in sustainability and natural fibres, it really is a great moment for wool. Wool's versatility and strong eco-credentials continue to attract opportunities for fashion and performance apparel as well as new applications including footwear, interiors (plus automotive interiors) and accessories," Julie said.

Window of opportunity

June to October is a crucial time in the yearly fashion cycle. It is during this time that retailers and brands in the northern hemisphere collect product ideas for their following year's autumn/winter collections. It takes at least 12 months for the trade to design and order garments, manufacture and transport them, and then stock them in the shops.

"The Woolmark Company has a 'window of opportunity' each year to convince brands and retailers to stock wool for a particular season – it's important to get the timing right. For example, there would be no point in us doing our trade marketing a month after they had already made their buying decisions," Julie explained.

For the northern hemisphere's 2024/25 autumn/winter season collections, The Woolmark Company is exhibiting at large and influential trade shows including:

- ITMA textile and garment technology show, Milan (June)
- Pitti Filati yarn and knitwear show, Florence (June)
- Première Vision fabric and apparel show, Paris (July)
- Milano Unica fabric and yarn show, Milan (July)
- Preview in Seoul apparel fabric show, Seoul (August)
- Performance Days sports and performance show, Munich (October)
- Japan Creation apparel fabric show, Tokyo (October)

In the weeks following trade shows, ongoing engagement and education are held by The Woolmark Company's global offices individually with retailers and brands. Training of retail decision makers, such as the company's buyers, merchandisers, designers and technologists, is undertaken to both stimulate interest and build their confidence to invest in wool product lines.

"Education and training of supply chain participants ensures wool remains competitive against other fibres and inspires designers, brands and retailers to use wool in their product ranges," Julie added.

THE WOOL LAB HELPS BUILD DEMAND FOR WOOL

The Wool Lab is a premier sourcing guide to the world's best commercially available wool fabrics and yarns. Since its inaugural edition twelve years ago, it has become an important tool for the global textile industry and is helping to build the demand and use of Australian wool globally.

The Wool Lab continues to evolve and go from strength to strength, twelve years on from the launch of the first edition in June 2011 by AWI's subsidiary The Woolmark Company.

The Wool Lab is a sourcing guide for designers and brands that contains swatches of a selection of the most innovative and quality wool fabrics, yarns and processes commercially available on the market from the best spinners and weavers in the world.

"Each season, we reach out to The Woolmark Company's global supply chain network – quality-oriented spinners, knitters and weavers across the world – to source their latest fabric developments," explained AWI General Manager, Processing Innovation and Education Extension, Julie Davies.

"With this, we curate a sourcing guide with a selection of the best textile and yarn swatches, which can then be ordered by designers and buyers directly from the manufacturers through The Wool Lab.

"By providing this service, we are helping to inspire brands' material strategies and forge strong relationships within the supply chain, thereby increasing the demand for wool."

Each edition of The Wool Lab contains several themes that reflect the diverse applications that wool can be used in the current textile and fashion landscape to generate business opportunities for the industry.



The latest edition of The Wool Lab, which contains swatches for the northern hemisphere's Autumn/Winter 2024/25 retail season, contains five theme books that reflect some of the growing market opportunities for wool, such as casualisation and activewear.

Broader wools are also taken into account, with the 'In-Spaces' theme book including wool fabric swatches for use in traditional interior applications such as blankets and upholstery, through to more innovative interior uses such as room dividers and decorative elements.



The physical editions and swatches of The Wool Lab are promoted to brands and retail buying teams at trade shows (see previous page) and directly in one-on-one viewings. However, anyone (including woolgrowers) can view the digital version of The Wool Lab on the Woolmark website – see box below.

The Wool Lab Digital

The Wool Lab Digital is the online version of the respected wool fabric and yarn sourcing guide. Although the physical editions of The Wool Lab remain popular, The Wool Lab Digital was launched in 2021 by The Woolmark Company in response to the evolving needs of today's market environment and to extend the sourcing guide's reach.

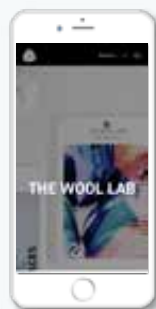
While the structure and functionality of The Wool Lab has been adapted digitally, the core of The Wool Lab Digital remains the same, providing a digital showcase of swatches from wool fabric and yarn suppliers, for designers and buyers to browse and source their own samples.

The Wool Lab Digital is freely accessible to fashion and textile industry professionals in a

dedicated area of www.woolmark.com. By simply registering (for free), users are able to browse the sourcing guide's themes and swatches – and choose a selection of wool fabrics and yarns in which they are interested for their upcoming collections.

Through the online platform, they can then contact the suppliers of their favourite swatches, anywhere in the world, to source samples and do business.

More information:
www.woolmark.com/the-wool-lab



Example swatches from the latest edition of The Wool Lab

The latest edition of The Wool Lab comprises a massive 565 swatches, categorised into a collection of five themes that reflect the diverse applications that wool can be used in the current textile and fashion landscape to generate business opportunities for the industry.

Below are just two example swatches from each of the five themes that illustrate the versatility of wool.

Bright orange mesh – suitable for base-layers

Washable reinforced wool shell – suitable for outer-layers

Sport Community

The future of Merino wool performance-wear that pushes the limits of sport in all its interpretations.

(127 swatches)

Knitted stripes with inlay lashes – suitable for scarves

Landscape effect jacquard knit – suitable for bags and shoes

Accessorise Yourself

Embrace wool to create accessories that showcase craftsmanship and self-expression.

(112 swatches)

Wool/silk jacquard – suitable for jackets and trousers

Floating yarn double jacquard – suitable for jackets and coats

Youthformal

For a younger generation, formal attire merges with a more relaxed, casual and modern elegance.

(101 swatches)

Virgin wool 3D effect pattern – suitable for trousers

Black and white bouclé tweed – suitable for jackets and outerwear

Casualisation

Today's formalwear keeps modern comfort in mind while maintaining a casual yet refined elegance.

(95 swatches)

Wool jacquard leaf knit – suitable for home accessories

Lambswool Prince of Wales flannel – suitable for upholstery

In-Spaces

Merino wool puts its superior natural properties at the service of interiors and human well-being in the home.

(130 swatches)

Brands and retail buying teams viewing wool swatches in The Wool Lab at The Woolmark Company's booth at a recent trade show in Europe.

RECENT HIGHLIGHTS OF STUDENT EDUCATION

AWI continues to foster the education and development of tertiary textile and fashion students – inspiring them in the early stage of their careers about the properties and benefits of Merino wool, and encouraging them to continue to use the fibre in their designs as they progress through their professional lives. Here are a few highlights of AWI’s recent work in this area.

Naturally Inspiring online seminars proves popular

The Woolmark Company’s Naturally Inspiring seminars for tertiary textile and fashion students not only offer them the chance to learn about the natural benefits of wool and the variety of ways to work with the fibre, but also give the students an insight into working in the fashion, textile and retail industries from those in the know. Below is an account of two recent seminars.

UK, Europe and beyond

In May, an online version of the Naturally Inspiring seminar was hosted as a two-part webinar by The Woolmark Company in the UK. Although the online seminar was initially targeted at tertiary students from the UK and Europe, the seminar also proved popular from further afield with students from Australia, Japan, US and Malaysia also tuning in.

Part 1 of the webinar delved into the global wool supply chain, highlighting various product and processing innovations as well as partner fibres and applications for wool.

Part 2 was a discussion with a panel of industry experts to help the students develop their understanding of the career opportunities throughout the global wool supply chain. The panel members were:

- Professor Sheila-Mary Carruthers – a designed practitioner supportive of industry projects to raise awareness of wool’s benefits.
- Eva Monachini – R&D Manager and Coordinator of D-house Urban Laboratory, a development centre in Milan that is partnered with The Woolmark Company.
- Paolina Russo and Lucile Guilmond – Designers at London-based fashion brand Paolina Russo, a finalist in the 2023 International Woolmark Prize.
- Mattia Trovato – Head of Communications at leading Italian textile company Manteco.

There were a lot of questions from the audience on subjects such as yarn and fabric sourcing, and how to go about setting up a supply chain as an emerging brand. The Woolmark Company was credited many times, demonstrating its role in facilitating connections across the global fashion and textile industries.

Japan

The Woolmark Company in Japan hosted an online Naturally Inspiring seminar across two days in June, which attracted 370 tertiary students. Sessions presented by The Woolmark Company included ‘Circularity and wool’ during which the sustainability aspects of wool were highlighted, and ‘The wool supply chain in Australia’ that provided attendees with a comprehensive understanding of the source of our nation’s premium wool fibre.

There were also four sessions that featured external guest speakers who delivered inspiring presentations and shared their expertise in the wool industry:

- Merino wool fabric manufacturer Reda Japan shared its strategic approach to the global market.
- Apparel company Dot One, which owns the ánuans womenswear brand, provided insights and guidance on selling wool products effectively.
- Product testing laboratory Keken Test Center discussed the importance of certifications in the wool industry.
- Care product manufacturer Lion Chemical provided insights about the proper care for wool items at home.

The Naturally Inspiring seminar provided a platform for industry professionals to gain valuable knowledge and insights from experts in the field. The event was a success in promoting the versatility and sustainability of wool, further establishing its significance in the Japanese market.

Merino wool student eco-showcase in Türkiye

Students from Istanbul Bilgi University in Türkiye used Australian Merino wool to create garments for an exhibition to accompany a collection of textile art works of indigenous Australians on show in Istanbul.

The exhibition titled ‘Clothes off the Loom’ was hosted by the Australian Embassy and Consulates in Türkiye in partnership with Istanbul Bilgi University and The Woolmark Company, from 21 June to 8 July.

The exhibition not only drew attention to the versatility of Australian Merino wool in the hands of the creative Turkish students from the university’s Textile and Fashion Design Department, but also showcased the environmental importance of zero/minimal waste during pattern-cutting in the textile and fashion industries.

Wool is the ultimate apparel fibre to fit into a circular model of textile production which minimises waste and pollution. By working with students on initiatives such as ‘Clothes Off the Loom’, AWI helps to educate them about wool’s natural eco-credentials and, increasingly, its suitability and benefits for the circular economy.

The ‘Clothes off the Loom’ exhibition was held in conjunction with a showcase of screen-printed textile art works, titled ‘Jarracharra: Dry Season Winds’, by indigenous artists from Babbarra Women’s Centre in Arnhem Land in Australia’s Northern Territory.

The exhibition brought together a showcase of two icons of Australia: Australian Merino wool and Australian indigenous artwork. But by involving young Turkish design students and Australian Indigenous artists, it also brought together people with different cultural backgrounds that have the same common goal of promoting the value of protecting one’s community, homeland and planet through the responsible use of textiles.



The Australian Consul General in Türkiye, Tony Huber, at the opening of the exhibition.

Wool science courses now run in India



The Woolmark Company's Wool Education Course Program Manager **Dr Allan De Boos** teaching students in India.

While courses from The Woolmark Company's wool science and technology program have been delivered for many years to textile students in China to help ensure that the country's mills can manufacture quality products made from Australian wool, courses were this year also delivered in three renowned technical institutes in India to encourage educators in India to adopt the resources for face-to-face education about wool processing in the subcontinent.

The course on 'Wool Dyeing' was delivered at Institute of Chemical Technology (Mumbai) to around 45 students and staff. The course on 'Wool Fibre Science' was delivered at the Veermata Jijabai Technological Institute (VJTI) in Mumbai to around 149 students and staff, and at the Technological Institute of Textiles and Science (TIT&S) in Bhiwani to around 150 students and staff. All courses were well received, and the lectures were recorded at TIT&S and placed on its YouTube channel. The online Woolmark Learning Centre was also promoted in every session so that the students can continue to learn about wool.

Australian Merino wool award at Hong Kong fashion show



The Woolmark Company's technical manager in Hong Kong, **Brenda Yang** (left), presenting the award sponsored by the Flinders Merino Group to winning student **Cheng Chau Hung** (centre), with a model wearing one of the winning designs (right).

The Flinders Merino Group and The Woolmark Company have once again partnered with Hong Kong Polytechnic University's (PolyU's) School of Fashion and Textiles, the region's most prestigious design school, to showcase Merino wool in contemporary design at its annual graduation fashion show.

At the fashion show in June, The Woolmark Company presented the Flinders Merino Group: Best Use of Australian Merino Wool Award to the winning fashion graduate. The Flinders Merino Group has sponsored the award for 15 years, in support of the PolyU students' use of wool.

To participate in the award, students needed to complete the Wool Appreciation Course on the Woolmark Learning Centre and their designs must contain more than 50% wool. The initiative provides the students with a good understanding of Australian Merino wool and contacts within The Woolmark Company. The graduation show itself attracts support from many of the region's key knitwear and apparel companies.

The winning student, Cheng Chau Hung, weaved all her own fabrics on campus to create her winning collection. Judges scored her highly for her structural woven fabrication, created using wool and wool-blend knitted yarn, which gave her designs a soft touch boosted with the tailored drape properties of woven fabric. The Woolmark Company's Hong Kong office aims to have further collaboration with her based on this innovative casual tailored wool concept.

Examples of wool education in China



Wool education courses being run at Institution Marangoni Shanghai (top) and the Beijing Institute of Fashion Technology (bottom).

The Woolmark Company in China continues to educate fashion and textile students about the natural benefits of Australian wool. Two recent examples include:

- A series of training courses were held for students from **Institution Marangoni Shanghai** school of fashion design in April. The sessions provided students with fresh perspectives on wool, particularly functional wool fabrics that sparked their interest.
- A Wool Appreciation Course was held in June to introduce more than 50 students at the **Beijing Institute of Fashion Technology** (BIFT) to the diverse range of wool innovations and fabrics as well as the benefits of using the fibre. The students were particularly impressed by wool's versatility and myriad of applications in fashion design.

MARKET INTELLIGENCE REPORT

Australian wool export destinations during the 2023/23 season

During the 12 months of the July 2022 to June 2023 season, a touch more than 325mkg of Australian wool was exported in all forms, with greasy wool the dominant form at 310.65mkg which represents 95.6% of all wool exports.

Scoured wool made up 1.4% of all wool exports and 3.0% was in the carbonised product, but as the ABS export data is on the processing weight, then both these figures would be slightly higher if measured in terms of their original greasy weight prior to local processing.

As far as greasy wool is concerned, 19 individual countries imported Australian raw wool during the year.

China remains firmly entrenched as Australia's leading destination for its wool clip. For the year, China imported more than 82.5% of Australian wool by weight. This is an increase of 2.4% over the previous season. When value of exports is measured, China accounted for 78.8% of the clip value which is nearly 5% lower than the money they spent on wool imports the previous year.

Away from the dominant buyer that is China, **India** has accelerated its percentage buying share and volume of Australian wool by importing more than 6.5% of the national

export by weight. This is an increase of 26.2% compared to 2021/22. Value wise, 6.4% of export value came from India which represented a spend of nearly 24% greater than last season.

Italy has dropped away by quite a bit in volume purchased and fell to 3.6% of all exports, which is an 11.7% drop in their wool purchasing by weight for the year. Italy's contribution though for value made up 7% of export dollars, but is a figure 3.6% lower than 2021/22.

Analysis of the fibre micron distribution of exports highlights some popular misconceptions of key wool export destinations. Italy for example has more than 40% of its imports broader than 20 microns, whereas most people would think superfine types would make up a high majority. This Italian figure is perhaps slightly skewed broader than reality though because the Egypt figures could be almost entirely added to the Italy figures as most of the export to Mediterranean Wool is done so for the use of Italian shareholders.

The most significant drop in wool exports has come from the **Czech Republic** (Czechia). The past year has seen a reduction of 33.8% volume by weight imported from Australia and Czechia now accounts for just 2.6% of Australian exports of wool by weight. They are buying lower value raw material from Australia with just 1.66% of clip value now emanating from Czechia imports which is 36.5% less than the preceding 12 months. The Czechia figures show that more than 55% of the Czechia purchasing is between 24- and 33-micron.

Germany was a nation that had a large drop in imports, being 1mkg less than the previous 12 months. It is 'normal procedure' that wools destined for Russia and Belarus are mostly transhipped by road through Germany, and the prevailing conflict in Ukraine could therefore perhaps be responsible for the drop.

Vietnam joined the ranks as a direct buyer of Australian wool by directly importing more than 150 tonnes of carbonised product. All of this was in the Merino microns of finer than 23-micron with more than 50 tonnes being finer than 19-micron. It is most likely assumed this purchasing would almost entirely be for cotton spinning operations.

Cameroon was a surprise first time importer of Australian wool by taking 18 tonnes of 20- to 23-micron wool. On the processed side, 23 countries imported semi processed wool of commercial weight.

FIGURE 1. AUSTRALIAN WOOL EXPORTS IN 2022/23 BY WEIGHT

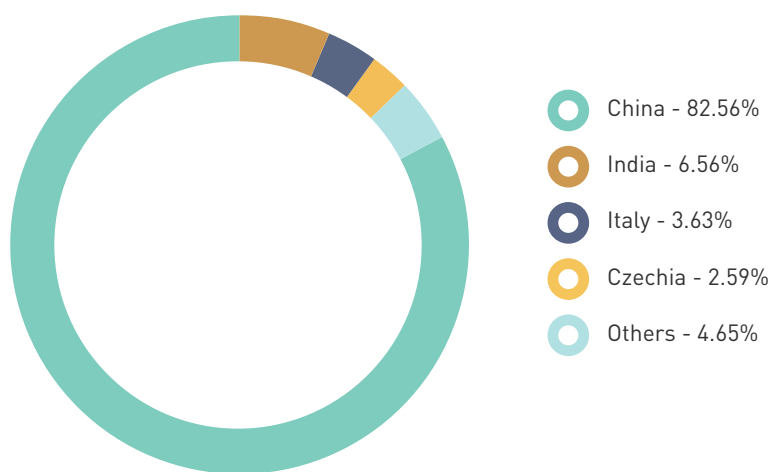


FIGURE 2. AUSTRALIAN WOOL EXPORTS IN 2022/23 BY \$A VALUE

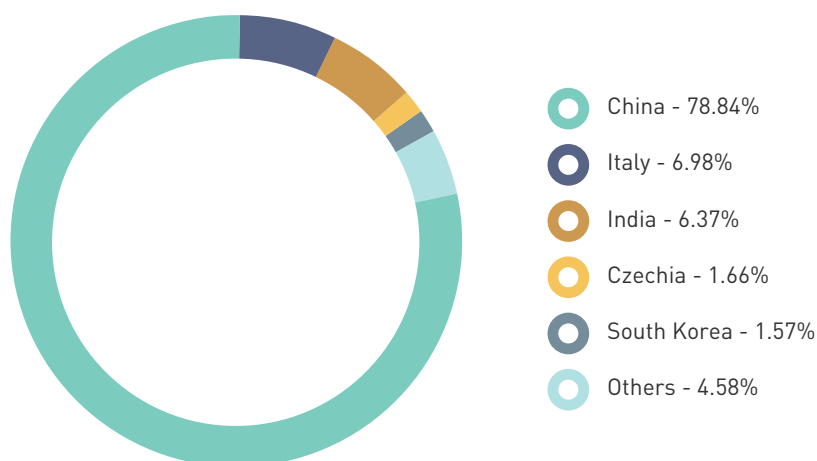


Table 1. All Australian wool export destinations in 2022/23, by weight (kg) and value

Country	Weight	% clip by weight	% change in weight	% clip by value	% change in value
China	268,370,330	82.57%	2.4%	78.84%	-4.9%
India	21,310,835	6.56%	26.2%	6.37%	23.7%
Italy	11,812,901	3.63%	-11.7%	6.98%	-3.6%
Czech Republic	8,434,428	2.59%	-33.8%	1.66%	-36.5%
Korea	4,520,220	1.39%	-10.7%	1.57%	-19.5%
Egypt	2,457,573	0.76%	-8.0%	1.04%	-0.9%
Thailand	2,114,046	0.65%	0.3%	1.09%	5.3%
Germany	953,237	0.29%	-47.7%	0.23%	-44.1%
Bulgaria	905,661	0.28%	7.3%	0.23%	1.0%
Japan	728,572	0.22%	-4.2%	0.68%	132.6%
United Kingdom	685,405	0.21%	-29.8%	0.27%	-29.7%
United Arab Emirates	566,490	0.17%	-24.8%	0.31%	-28.1%
USA	511,040	0.16%	5.7%	0.14%	-8.0%
Turkey	323,818	0.10%	86.5%	0.14%	75.3%
Uruguay	236,295	0.07%	-69.6%	0.08%	-65.4%
Mexico	210,149	0.06%	-12.3%	0.07%	-7.3%
South Africa	164,130	0.05%	113.0%	0.07%	6.8%
Spain	158,533	0.05%	-1.1%	0.04%	-9.8%
Vietnam	152,080	0.05%		0.04%	
Mauritius	132,795	0.04%	-46.7%	0.05%	-50.3%
Lithuania	79,442	0.02%	-8.4%	0.04%	-8.3%
New Zealand	43,393	0.01%	-73.6%	0.01%	-83.4%
Pakistan	38,465	0.01%	0.7%	0.01%	-22.7%
Malaysia	37,146	0.01%	-39.7%	0.02%	-10.2%
Taiwan	26,488	0.01%	-55.9%	0.01%	-52.9%
Portugal	25,526	0.01%	99.8%	0.01%	118.6%
Cameroon	18,256	0.01%		0.01%	
Tunisia	13,760	0.00%	66.4%	0.01%	66.4%
Singapore	575	0.00%		0.00%	
Sri Lanka	180	0.00%		0.00%	
TOTALS	325,031,769	100%	0.70%	100%	-4.4%

Table 2. All Australian wool export destinations in 2022/23 in kg, by micron

Country	<=19.0	20.0 - 23.0	24.0 - 27.0	>=28.0	Total
China	134,719,489	94,175,580	21,027,450	18,447,811	268,370,330
India	5,375,330	12,371,442	1,639,871	1,924,192	21,310,835
Italy	7,020,066	4,255,728	35,161	501,946	11,812,901
Czech Republic	1,879,894	1,806,073	2,201,350	2,547,111	8,434,428
Korea	1,690,358	2,829,862			4,520,220
Egypt	2,076,898	380,675			2,457,573
Thailand	637,308	1,476,738			2,114,046
Germany	148,688	344,535	18,262	441,752	953,237
Bulgaria	456,346	79,081	101,769	268,465	905,661
Japan	284,961	443,591		20	728,572
United Kingdom	61,103	533,243		91,059	685,405
United Arab Emirates		566,490			566,490
USA		100,177		410,863	511,040
Turkey	98,689	110,561		114,568	323,818
Uruguay	236,295				236,295
Mexico	51,054	108,359		50,736	210,149
South Africa		151,261		12,869	164,130
Spain	64,350			94,183	158,533
Vietnam	50,530	101,550			152,080
Mauritius	63,875	68,920			132,795
Lithuania	14,078	55,735		9,629	79,442
New Zealand	4,415	38,119		859	43,393
Pakistan		38,465			38,465
Malaysia	19,673	17,473			37,146
Taiwan		26,488			26,488
Portugal	25,526				25,526
Cameroon		18,256			18,256
Tunisia		13,760			13,760
Singapore				575	575
Sri Lanka				180	180
TOTALS	154,978,926	120,112,162	25,023,863	24,916,818	325,031,769

AVERAGE MONTHLY EMI COMPARISON

The chart opposite provides a snapshot of how the AWEX monthly Eastern Market Indicator (EMI) and a range of microns have performed for the past three months (May 2023 – July 2023) in Australian dollar terms compared with the previous five years (May 2018 to April 2023) (circles) and the decade previous to that, May 2008 – April 2018 (squares).

During the past three months, the monthly EMI averaged at \$12.03 which is a 133c decrease from the average monthly EMI for the previous three months, and is tracking at the 17th percentile against the previous five-year monthly EMI. This means that in the previous five years the monthly EMI has recorded a lower price than the current \$12.03 (May 2023 – July 2023) for 17% of the time.

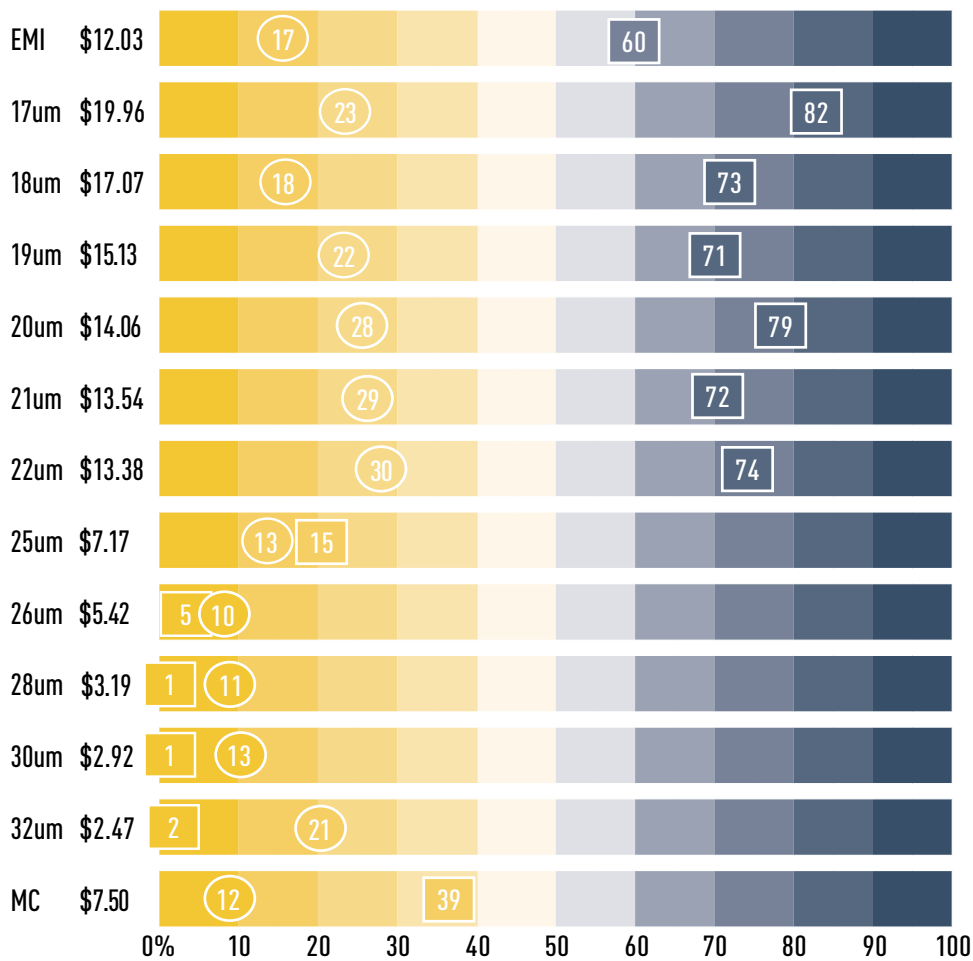
While the EMI is tracking at the 17th percentile over the previous five years, it is tracking at the 60th percentile when compared to the decade May 2008 – April 2018. This means the current EMI of \$12.03 (May 2023 – July 2023) is higher now than it was for 60% of that decade.

18 micron averaged at a monthly value of \$17.07 (18th percentile for the previous five years and 73rd percentile for the decade before that), 21 micron averaged at \$13.54 (29th percentile for the previous five years but 72nd percentile for the decade before that), and 28 micron averaged at \$3.19 (11th percentile for the previous five years and 1st percentile for the decade before that).

For the past three months, Merino Cardings averaged at \$7.50, operating at the 12th percentile for the previous five years and at the 39th percentile for the decade before that.

AVERAGE MONTHLY EMI FOR MAY 2023 – JULY 2023 COMPARED WITH

- PREVIOUS 5 YEARS MAY 2018 – APRIL 2023
- THE DECADE MAY 2008 – APRIL 2018



Market intelligence at wool.com

An important part of AWI's Wool.com website is market intelligence information for woolgrowers.

As well as the Weekly Price Reports and Monthly Market Intelligence Reports, there is a graphical display of:

- Eastern Market Indicator – you can select to display AUD, USD, CNY or EUR.
- Offering – displays bales offered and bales sold.
- Currency movements – you can select to display AUD/USD, AUD/CNY or AUD/EUR.
- Forecast of bales sold – displays previous season, current season, current week and forecast.

For the first three categories above, you can select to display data from 3 months to 3 years ago.

AWI also continues to send wool prices and market intelligence direct to about 6,700 woolgrowers' mobile phones. If you would like to subscribe to the free SMS service, visit www.wool.com/subscribe where you will be asked to input your name and the mobile phone number to receive the SMS. You can unsubscribe from the service at any time.

More information: www.wool.com/marketintel

M&S: A LONG-PROMISED FASHION REVIVAL?

AWI Global Strategic Advisor Peter Ackroyd reports on an upturn in the fashion business of major British multinational retailer Marks & Spencer (M&S), which will likely benefit woolgrowers. Mr Ackroyd is a former President of the International Wool Textile Organisation and is Chief Operating Officer of the Campaign for Wool.



AWI Global Strategic Advisor, Peter Ackroyd.

M&S's Head of Clothing, Richard Price, has had years of industry experience working in fashion and home with NEXT, a previous stint with M&S, plus time at Tesco and British Home Stores. Appointed to M&S again in 2019, Mr Price must be more than pleased to read recently in the influential *The Sunday Times Style* magazine that M&S women's wear 'is no longer seen as naff' (sic) and is currently worn in 'all the right places'.

All he now needs is for one of the Royals (preferably Kate) to pick up a piece from a flagship M&S store, and forty long years of being a relatively smart destination for quality food and possibly ladies' underwear, but sadly nothing else, may finally be coming to an end.

Founded in Leeds in 1884 by Michael Marks, a Jewish immigrant from what is now Belarus, M&S throughout the first six decades of the 20th century followed a classic retail supply chain route of sourcing woollen and worsted fabrics in the Bradford and Leeds district of West Yorkshire and cutting and sewing garments in neighbouring central Leeds and nearby north eastern England, often using the Dewhurst Group whose original owner, Isaac Dewhurst, had lent Marks his first £5.00 to begin the business. The rest, as they say, is history.

How the market then changed

Whilst not wishing to dwell too long on history, woolgrowers and the wool industry could usefully note two significant developments that occurred in the last 25 years of the 20th century.

Firstly, polyester/viscose (often with Lycra) began to emerge as the dominant fibre in tailored women's clothing in the 1960s, replacing worsted Merino that had been traditionally woven by local mills in the UK, Italy, Germany and France. The 'migration' from wool to synthetics, largely due to price, but also due to care concerns, cost Australia's woolgrowers around 400 million kg of production per year, reducing the early 1970s annual clip of around 600 million kgs to the 200m kgs of today.

There had been a previous 'flight' from wool in the interwar years of the 20th century when synthetic silk (rayon), a cellulosic fibre developed in Besançon and Lyon in France, made massive inroads into women's outer wear.

Another phenomenon that wrecked the sound local business model built by Michael Marks and the Dewhurst family in the late 19th and early 20th centuries is commonly known as 'globalisation' or 'offshoring'.

This saw clothing manufacturing, both cutting and sewing and knitting, move eastward, in almost indecent haste, to the Balkans and Eastern Europe, finally ending up in the Indian Subcontinent, Hong Kong and subsequently Greater China and former Indochina, as retailers scrambled to achieve lower price points in what became an absurdly competitive market.

Offshoring has led to 92% of all clothing consumed in the UK being imported from long distance destinations (UK Fashion and Textile Association official figures). Similar figures apply to Germany, Japan and the USA.

Has the current geopolitical situation in Asia Pacific engendered a will to bring manufacturing back home? Well, there certainly is a will accompanied by much hot air, but not necessarily an obvious way.

An M&S fashion revival?

In May of this year M&S announced, after almost two decades of promising investors and customers a revival, that sales were up +9.9% to almost £12 billion. Pre-tax profits rose to £475.7 million from £391.7 million. On receipt of the news, the group's shares surged +11.7%. M&S stock is up +46% this year, the most of any retailer in the UK FTSE 250 and more than any retailer in the FTSE 100. It must be remembered, however, according to Bloomberg data, on a five-year basis, stock is down -40%, although most analysts concur change is definitely in the air.

It is the +11.5% increase in clothing and home sales to £3.72 billion that has caused a good few in the trade to ask if M&S has really turned the long-promised corner after being in the dowdy doldrums for decades. Several believe it has.

Blazers and tailored trousers, suits with a difference à la Paul Smith, trench coats and shirting for men and women, all prominent on the runways of Milan and Paris, have been the fashion zeitgeist for several seasons, which, according to reliable observers, has seen a trend for timeless classics and understated elegance trickle down from celebrity parades at film festivals and first nights to British and German High Streets, anxious to capture the current trend for elegant informality.

Sampling for all the looks referred to above was very much in evidence at recent Paris and Milan fabric trade shows for the Northern Hemisphere 2024/25 winter, leading more than one weaver to suggest that, for the first time in more than a decade, M&S is seriously back into wool in women's wear, particularly for tailored suits and separates.

In the East India Club box at the recent Royal Ascot, a famously fashionable lady, on being complimented on her dress and tailored blazer worn casually over the shoulder, responded by pointing out the prominent M&S Autograph label coupled with a telling, almost apologetic... "would you ever have guessed?" raised eyebrow.

Richard Price clearly has work to do, but he is, as the financial gurus concur, finally on the right trajectory and woolgrowers should benefit accordingly.

USE THE NWD TO ATTRACT THE HIGHEST PRICE

All woolgrowers are being urged to complete the National Wool Declaration (NWD), as wool sold as Not Declared usually receives a discount. The NWD provides transparency to buyers and the whole supply chain and helps woolgrowers earn Premiums and/or avoid Discounts for their wool.

Key messages

1. To attract the highest price for their wool, all woolgrowers, regardless of their Mulesing Status and wool type, should ensure that their wool is accompanied by an NWD.
2. Failure to complete an NWD has usually resulted in the wool being discounted.
3. Declaration rates for Non Mulesed (NM) wool continue to climb (currently 20% of all wool), as do the rates for Mulesed with Analgesic/ Anaesthetic (AA) wool (currently 41% of all wool).



The National Wool Declaration (NWD) enables woolgrowers to communicate directly with prospective buyers, processors and retailers; and them send key wool market messages back to woolgrowers.

Whenever AWI discusses the Australian wool industry's animal welfare with brands and retailers along the supply chain, they invariably say that they would very much like all Australian woolgrowers to declare their wool through the NWD; it creates two-way transparency and choice in the marketplace.

Once a woolgrower has completed the NWD, which is voluntary, the contents are converted for inclusion in sale catalogues and test certificates. All woolgrowers are encouraged to complete the NWD, regardless of their sheep's breed and wool type, and husbandry practices.

Table 1 shows that Queensland woolgrowers top the list for declaration rates at 86% of wool sold in 2022/23 followed by Tasmanian woolgrowers at 83%. Queensland was the least declared in 2010 (30%) but now is the highest declared state in 2022/23. Tasmanian and Queensland woolgrowers also top the Non Mulesed (NM) categories at 43% and 40% of wool sold (which has been the case for a

long time). These two states have the most NM wool as the risk of flystrike is lower, the weather in Tasmania is cool and Queensland hot with much shorter fly seasons.

Table 2 (opposite) shows that Merino breeders with lower micron wool, less than 18.6 microns, are more likely to declare, with only 18% of wool sold not declared.

From a financial perspective, Table 3 (opposite) shows that woolgrowers usually receive **premiums** for wool declared as

Non Mulesed (NM) or Mulesed with Analgesic/Anaesthetic (AA). **This is a greater issue for WA woolgrowers as their declaration rate is about 54%, lower than all the other states that range from 77% to 86% wool declared.**

The premiums for NM wool in 2022/23 were lower than the previous year which may be due to a more volatile market. (Note the AWEX data does not include wool sold direct from woolgrowers to woolbuyers.)

Table 1. NWD declaration rates (%) by Mulesing Status and state for season 2022/23

Mulesing Status	NSW	Qld	SA	Tas	Vic	WA	Total bales
NM	23.7	40.0	12.2	43.5	23.6	6.8	293,261
CM	3.5	4.4	3.3	8.1	4.1	0.8	47,903
LN	0.1	0.0	0.1	0.0	0.2	0.0	1,272
AA	39.8	32.1	52.8	25.5	43.0	36.7	609,092
M	10.1	9.4	11.1	6.1	5.8	9.9	136,413
ND	22.9	14.0	20.6	16.8	23.2	45.8	390,578
Total bales	588,307	46,392	230,571	45,669	291,077	276,503	1,478,519
% declared	77.2	86.0	79.5	83.2	76.7	54.2	74.8

Wool sold as Not Declared (ND) usually receives a Discount compared to wool that is declared as Mulesed (M). These are the averages over the selling year and if you do mules, it would likely be financially advantageous for you to complete the NWD and declare your wool as Mulesed (M), rather than not complete the NWD. The size of the discount is increasing over time, with 16 and 17 micron wool most discounted.

The message is clear. To ensure your wool attracts the highest price possible, you need to ensure that your wool for auction is accompanied by an NWD.

Table 2. NWD declaration rates (%) by Mulesing Status and breed/micron (µm) for season 2022/23

Breed	Merino					Crossbred				
	Mulesing Status	<18.6	18.6-20.5	20.6-24.6	>24.6	Total	<18.6	18.6-20.5	20.6-24.6	>24.6
NM	20.2	10.8	8.3	17.7	168,549	36.1	32.5	42.2	42.1	124,712
CM	4.1	3.6	2.6	5.8	42,933	10.6	1.1	0.7	1.9	4,970
LN	0.2	0.0	0.1	0.0	1,264	0.0	0.0	0.0	0.0	8
AA	50.5	47.6	46.2	13.5	573,885	9.6	10.4	12.0	11.9	35,207
M	7.2	11.4	15.4	30.3	121,809	4.3	6.2	3.2	5.3	14,604
ND	17.8	26.6	27.3	32.6	273,187	39.4	49.8	41.9	38.9	117,391
Total Bales	482,868	513,764	184,685	310	1,181,627	302	58,354	58,354	236,266	296,892

Table 3. Premiums and Discounts for Mulesing Status (c/kg clean) for seasons 2015/16 and 2020/21-2022/23 (comparison with declared as Mulesed)

		MERINO							NON-MERINO			
		16	17	18	19	20	21	22	27	28	29	30
Non Mulesed (NM)												
Season	2015/16	10	15	7	8	8	1	-15	0	-1	1	4
	2020/21	33	27	32	26	19	19			0	6	2
	2021/22	78	77	68	53	51	12		7	5	8	
	2022/23	25	36	15	17	19	6		0	-2	1	0
Ceased Mulesing (CM)												
Season	2015/16	51	15	3	8	5	4	-1	2	5	-8	-3
	2020/21		1	3	8	8	3			1		
	2021/22		61	40	31							
	2022/23		30	14	14	10	6					
Mulesed with Anaesthetic &/or Analgesic (AA)												
Season	2015/16	2	2	-4	0	1	0	2	8		9	14
	2020/21	19	12	10	11	11	5	3		4	7	2
	2021/22		16	12	13	14	1	6	3	5	3	
	2022/23		19	5	9	6	4	0	0	0		
Not Declared (ND)												
Season	2015/16	8	5	-2	-4	-4	0	0	-6	-4	-2	-2
	2020/21		-4	2	-5	-6	-1	-2		-8	-4	
	2021/22		-6	-5	-7	-10	-4		-7	-7	-10	-6
	2022/23	-39	-28	-2	0	0			-4	-15	-13	

Source: AWEX

Criteria for calculation of Premiums and Discounts (c/kg clean) for Mulesing Status:

- Australian stored; Merino adult/weaners and crossbred fleece
- >30 N/ktex, >60% Schlum Dry, <2.2 VMB, Styles 4/5, Good/light colour (incl. H1), P Certificate
- Lengths according to diameter range: 70-95 mm (<18 µm), 75-99 mm (19-21 µm), 83-104

mm (22-24 µm), 90-110 mm (26-29 µm), 100-130 mm (30-34 µm)

- Records per group (micron/NWD status) >2, empty cells when not enough data to generate a P or D.
- Comparison with prices for wool declared as Mulesed.

For further advice on achieving Premiums for your wool, contact your wool broker.

More information: www.awex.com.au/market-information/mulesing-status/

Don't let your Declaration be wasted!

If you don't **sign and date** your NWD, the Mulesing Status of your mobs/lines of wool will not be shown on the sale catalogue and test certificate. This can reduce the number

of buyers bidding on your wool, as well as the price you receive.

To ensure the Mulesing Status of your wool is known by potential buyers prior to sale, sign and date the NWD.

It is good practice for owner/managers

to talk to the wool classer at the start of shearing to detail all mobs and to sign/date the declaration.

Note, eSpecis can be electronically signed.

READERS' PHOTOS

PHOTO: Maksym Belchenko



Have you got any interesting photos that you'd like to share with other readers of Beyond the Bale?

If so, please email the image and a brief description to the editor of *Beyond the Bale* Richard Smith at richard.smith@wool.com, or you can tag us #beyondthebale on Instagram.

If you email or tag a photo that gets published in Readers' Photos, you'll receive from us a paperback copy of the Kondinin Group's *The Story of Wool*.

Under the old gum tree

Lynette Fish sent in this photo of sheep under the old gumtree on the Fish family farm on the Interlaken Road north west of Oatlands in Tasmania.



Reunited

Lexi Fishpool of 'Meryula' at Tottenham in central western NSW being reunited with her pet lamb in the yards. Thanks to Lexi's mum Lisa for sending in the photo.



From glow to go

Two very different photos from Grace Corrigan (@fairviewphotos) of Burrumbuttock in the Riverina of NSW. (1) Sheep in a golden glow on the family property. (2) Grace's eldest brother Luke, who in 2022 set up a wool carting business Corrigan's Rural Freight which involves on-farm pickups of wool bales and transporting them down to Melbourne.



Snack attack

Amy Rouse of 'Marchmont Park' at Leadville in central western NSW feeding a snack to her poddies on the property, snapped by her father Malcolm who sent in the photo.

AWI CONSULTATION WITH GROWER REPRESENTATIVES

AWI consults with woolgrower representative bodies through the WICP and WCG to help the company determine the key R&D and marketing priorities of woolgrowers and industry. Woolgrowers wanting to provide feedback to AWI through the WICP or WCG are encouraged to contact their member organisation.

AWI regularly consults with woolgrower representative bodies through a consultation process that was developed with industry endorsement and rolled out in 2019.

The consultation process enables AWI to find out the key R&D and marketing priorities of these bodies and the woolgrowers that they represent, while also providing them with information on AWI activities and performance.

There are two key forums through which AWI formally consults and engages with woolgrower representative groups: (1) AWI Woolgrower Industry Consultation Panel (WICP) which meets four times per year, and (2) AWI Woolgrower Consultation Group (WCG) which meets twice per year.

Woolgrowers wanting to provide feedback to AWI through the WICP or WCG are encouraged to contact their member organisation – see below.

AWI Woolgrower Industry Consultation Panel (WICP)

The purpose of this forum is to ensure clear, two-way consultation between AWI and organisational representatives, through to woolgrowers. The meeting provides an opportunity for the AWI Board to receive and provide feedback on current/important issues and relevant topics from Board meetings.

The WICP comprises a core group of members from the nine national woolgrower organisations. Their contact details are below:

ASHEEP

Chair: David Vandenberghe
0427 786 049
wattledale@vandenberghepartners.com.au
www.asheep.org.au

Australian Association of Stud Merino Breeders

CEO: Sally Hicks
0417 561 983
office@merinos.com.au
www.merinos.com.au

Australian Superfine Wool Growers' Association

Cathy Hayne
(03) 9311 0271
aswga@woolindustries.org
www.aswga.com

Australian Wool Growers Association

Board member: Tom Moxham
0403 721 866
thomasanthonymoxham@hotmail.com
www.auswoolgrowers.com.au

Broad wool representative

Peter Blackwood
0418 134 800
peter.claire@harlandrise.com.au

Commercial Merino Ewe Competitions Association

Tom Kirk
0439 952 562
tom@bundemar.com.au
www.ewecomps.org.au

MerinoLink

Richard Keniry
0427 878 541
admin@merinolink.com.au
www.merinolink.com.au

Pastoralists & Graziers Association of Western Australia

Bindi Murray
(08) 9212 6900
pga@pgaofwa.org.au
www.pgaofwa.org.au

WoolProducers Australia

President: Steven Harrison
(02) 6110 2067
president@woolproducers.com.au
www.woolproducers.com.au

The WICP nominates and appoints its own independent chair, and includes representatives from the Department of Agriculture, Fisheries & Forestry (DAFF) plus two AWI Board directors.

For each WICP meeting, AWI publishes on its website (1) a communique from the WICP independent Chair providing a report of the meeting, and (2) the AWI Business Unit Update presented to the WICP.

AWI Woolgrower Consultation Group (WCG)

The WCG is a broader group of 28 representatives, comprising state and regional production-based woolgrower groups, as well as the members of the WICP. The groups in the WCG (aside from the WICP members already listed about) are:

AgForce Queensland

(07) 3236 3100 www.agforceqld.org.au

Australian Dohne Breeders Society

(08) 8210 5229 www.dohne.com.au

Birchip Cropping Group

(03) 5492 2787 www.bcg.org.au

Flinders Merino

Geoff Power: 0428 581 067
sambasbb@dodo.com.au

Liebe Group

(08) 9661 1907 www.liebegrup.org.au

Livestock SA

Joe Keynes: 0428 648 235 www.livestocksa.org.au

Mallee Sustainable Farming

www.msfp.org.au

Monaro Farming Systems

0456 948 892
www.monarofarmingsystems.com.au

NSW Farmers Association

(02) 9478 1000 www.nswfarmers.org.au

NSW Stud Merino Breeders' Association

(02) 9763 2744 www.merinosnw.com.au

Queensland Merino Stud

Sheepbreeders' Association
0415 806 002 www.qmssa.net

SA Stud Merino

Sheepbreeders Association
(08) 8212 4157 www.merinosa.com.au

Stud Merino Breeders

Association of Tasmania
0400 128 200 www.merinos.com.au/tasmania

Stud Merino Breeders' Association of WA

0499 846 466 www.merinowa.com.au

SuperBorders

(02) 6773 3289 www.superborders.com

Tasmanian Farmers & Graziers Association

(03) 6332 1800 www.tfga.com.au

Victorian Farmers Federation

1300 882 833 www.vff.org.au

Victorian Stud Merino

Sheep Breeders Association
03 5439 5094 www.merinvictoria.com

Western Australian Farmers Federation

(08) 9486 2100 www.wafarmers.org.au

More information: www.wool.com/consultation

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